

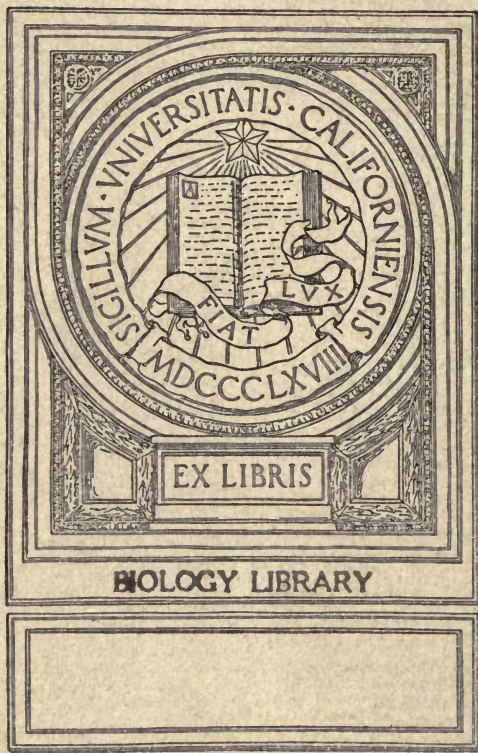
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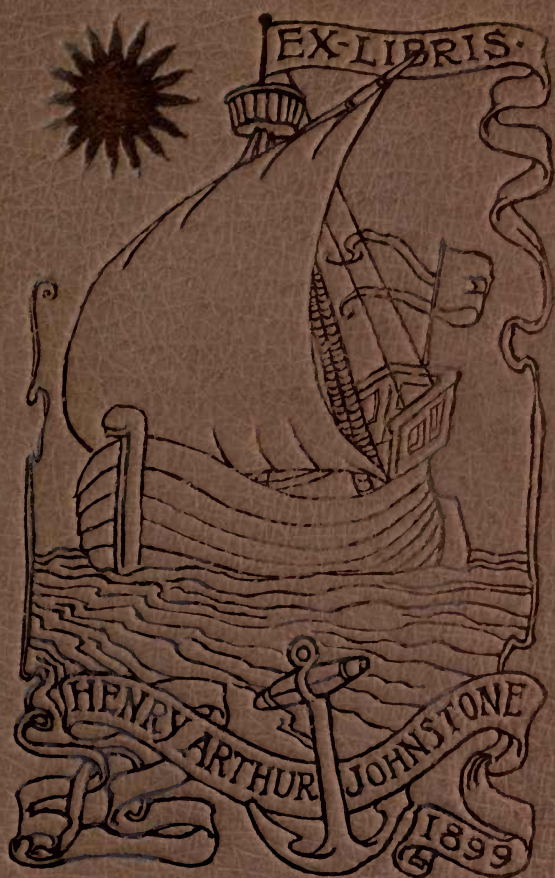
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A VERTEBRATE FAUNA  
OF THE  
ORKNEY ISLANDS

BY

T. E. BUCKLEY, B.A., F.Z.S.

MEMBER OF THE BRITISH ORNITHOLOGISTS' UNION, ETC.

AND

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S.

MEMBER OF THE BRITISH ORNITHOLOGISTS' UNION, ETC.

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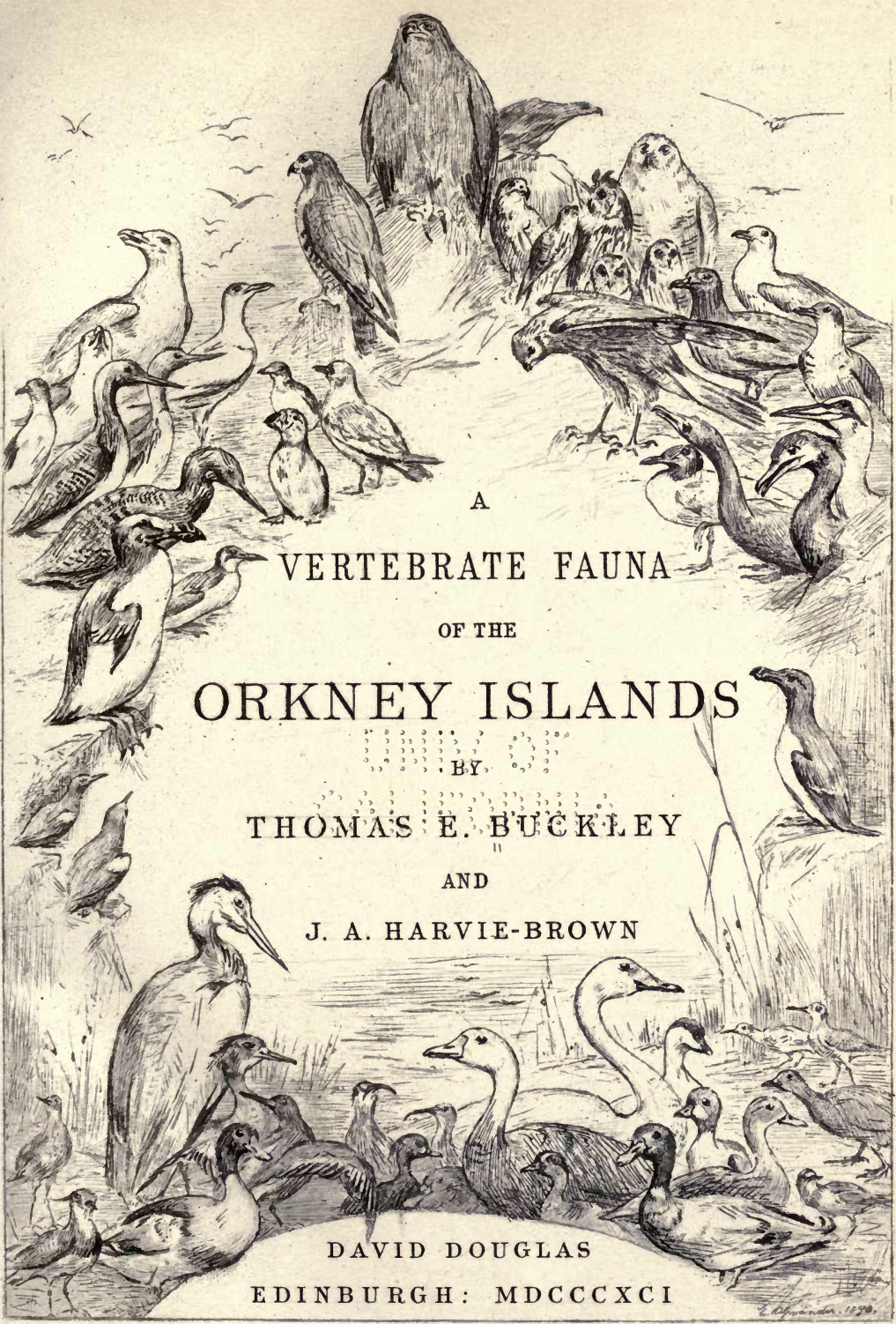
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AND  
J. A. HARVIE-BROWN

DAVID DOUGLAS  
EDINBURGH: MDCCCXCI

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## P R E F A C E

THE plan of the present volume is built much on the same lines as those of the two preceding ones, though we have made one or two alterations which appeared to us, if not necessary, at least an improvement on these. Thus, instead of giving a list of all the species included in the British Fauna, we have only given those about which we had any information, by these means doing away with a good deal of unnecessary matter.

We have been aided in our work by many able and willing correspondents, who have spared themselves no trouble in answering our numerous inquiries, besides helping us in any other way in their power. On the Mainland we are indebted to Mr. Cursiter for access to his valuable library, and for the trouble he has taken in looking up and pointing out to us any passages that he thought would be of use in furthering our work. Mr. Cursiter is a well-known authority on Orcadian and Shetland antiquities, which are his special study, and

in addition to his almost perfect library of the literature of the two groups of islands, possesses a very fine and extensive collection of their antiquities, commencing from the old stone age down to more modern times.

To Mr. T. W. Ranken we are indebted for many notes not only his own, but those that were made by his father, all of which are of great interest. Mr. Ranken's brother-in-law being the proprietor of Eday, has enabled him to give us all available information concerning that island. From Mr. Irvine-Fortescue we have received a large number of most interesting and valuable notes, made out with the greatest care, and evidently written by a man who is both a sportsman as well as a naturalist, and who is not in the least likely to lead one astray by any rash statement. Mr. E. S. Cameron, besides giving us the use of all the information he had collected from various quarters, kindly drove us to many places on the Mainland, thus enabling us to visit with ease what it would otherwise have cost us much trouble and inconvenience to do. It is to his care and protection that the birds have been allowed to increase and multiply on Eynhallow in the way they have done. Mr. Watt, the owner of Skail House—one of the oldest and most interesting mansions



in the Orkneys—also possesses the loch of Skaill, which, to an ornithologist, is one of the most attractive in the Mainland, and he has sent us many notices of waterfowl from thence; we think there is more still to be done there and in that neighbourhood, Mr. Watt himself being more an antiquarian than ornithologist. We have also corresponded with Mr. Leask of Boardhouse and Mr. Cowan of Kirkwall, the latter gentleman being quite an authority on fish.

Sanday has perhaps given more rare birds to the Orkneys than almost all the other islands put together; and the late Mr. Strang's place of Lopness has been ably filled in all senses of the word by his successor Mr. Harvey. The latter gentleman has added the Nutcracker to the faunal roll, and he has been good enough to send us an almost complete list of the birds of Sanday as well as a very interesting description of the island itself. Hearing that we were purposing to bring out a volume on Orkney birds, Mr. Monteith-Ogilvie was good enough at once to send us a note of the Pectoral Sandpiper procured by him in Westray, and he has since by correspondence given us a great deal of information on birds both from that island and Papa Westray.

Through the kindness of Mr. Moodie-Heddle, the

proprietor of Hoy, we were enabled to make, ourselves, an almost complete survey of that island, which includes North and South Walls, and we are extremely indebted to him for his hospitality and aid. His own perfect knowledge of the island helped us to visit, without loss of time, the breeding-places of the more interesting birds, and the knowledge thus obtained was largely supplemented by notes kept for many years both by his father and himself, and since then by continued correspondence. Indeed we think better results might have been arrived at had Mr. Moodie-Heddle and Mr. Irvine-Fortescue taken the whole subject in hand themselves.

The schedules we have received from the Pentland Skerries show that Mr. Gilmour, the assistant light-keeper, entered into that work *con amore*; and the number of interesting facts brought to light by the Migration Reports can best be realised by a reference to the chapter on those islands. We here tender him our best thanks for the intelligent interest he has displayed all through.

Wherever we have gone among the islands, we have always met with the greatest kindness, and our numerous inquiries have been answered to the best of the giver's ability; and we here wish to place on record



the courteous help and kindness we have received from one and all.

Almost at the last moment we obtained a number of most interesting notes from Mr. Monteith-Ogilvie, who was shooting during the autumn and winter of 1889, in Westray and Papa Westray. These, together with the results of a birds'-nesting trip in May 1890, will be found either incorporated into the body of the work or in the Appendix; and we are much obliged to Mr. Monteith-Ogilvie for sending us, unsolicited, so much valuable matter.

We are again indebted to Mr. J. G. Millais for the use of three of his beautiful sketches of Orkney localities, and we think the reproductions are worthy of all praise. The picture of the view of Loch Stenness should have special interest to the ornithologist, as it and Harray are the only localities where the Wild Swan is known or recorded to have bred in the British Isles.

For our title-page we have to thank Mr. Edwin Alexander.

Many of our illustrations have been copied from photographs taken by Mr. Norrie, sometimes under circumstances the reverse of comfortable or convenient;

and we think that the reproductions, done by Messrs. Annan, have ably seconded Mr. Norrie's efforts. The view of Papa Westray was done by Mr. E. Caldwell, who came north specially to make this sketch. Apart from the great interest attaching to the locality, there is a fresh look about the picture which must specially attract those who are fond of the sea and cliff scenery.

For uniformity's sake we have used the spelling of the Orkney names of places as given in Bartholomew's Reduced Ordnance Map, scale two miles to an inch, and also because this map is of most use to the general reader. An Orcadian gentleman pointed out to us that many of these names have been incorrectly spelt, but to have altered them might have led to confusion, and have been of little practical utility. We think every locality of consequence mentioned in the text will be found in the accompanying map.

No Faunal List can ever be absolutely perfect. Man is ever changing the surface of the earth in some way or other, and thus, by altering the conditions under which animals exist, the animals themselves must also vary in either the extension or restriction of their range. Since the Migration Committee took the lighthouses in hand, the returns from these places show these facts as



to birds in a very marked degree. This must necessarily soon put any work on Natural History more or less out of date ; it is our duty to make our book as perfect as possible up to the date of publication. We trust this will be found a sufficient excuse for adding an Appendix to contain fresh information, or information we may have overlooked in the first instance.

In several cases we may have erred in giving all the notes as we received them from our correspondents. But these notes were given us in good faith ; and where we think there has been any likelihood of mistakes on their part we have pointed them out, so that our readers can form their own judgment ; and we trust our correspondents will take these remarks in good part, and not think we are criticising them in any supercilious spirit.

We are afraid our list of Fish is not altogether satisfactory. We applied to several people to aid us, but the information thus gleaned is very meagre. At one time we contemplated leaving out the whole subject, but on second thoughts we considered it better to put together what notes we could get, and point out here to succeeding Naturalists where fresh fields for their enterprise lay. It is a subject which, though at present taken up by few,

would, we should say, well repay patient investigation. In other branches of Natural History, outside our own particular ones, such as Crustacea, Botany, etc., we are given to understand there are several workers through the islands, and had Messrs. Baikie and Heddle carried on their proposed work, no doubt all these subjects would have been included therein. In that case, from their insular position, the fauna of Orkney, both vertebrate and invertebrate, would have been very complete. It would be well if others would take up the subject where we here leave it, and add a second, and no less interesting, volume.

T. E. BUCKLEY.

J. A. HARVIE-BROWN.

*March 2, 1891.*

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## INTRODUCTORY

CONSIDERING the number of local faunas already issued, it seems not a little curious that Orkney should have been so long left to take care of itself, there having been no attempt made to write a Fauna of the whole group, since Messrs. Baikie and Heddle's work appeared in 1848. And this is the stranger, as islands generally possess, for the naturalist, a greater interest than a mainland. Certainly there are articles in several of the Natural History magazines which bear on the subject, and we ourselves wrote a paper on the Mammals and Birds of Rousay,<sup>1</sup> the result of a nine months' residence on that island. But all these are isolated cases, and require collecting and revising before they can be brought into a "harmonious whole." *The Zoologist*, *Field*, and *Land and Water*, contain numberless references to the capture of rare visitants, but the want of a good index to the first named, and the comparative inaccessibility of the two latter, render the work of collecting these records almost impossible; but such notices as we have been able to cull from them will be found under the species to which they refer.

Readers of our book need not expect much in the way of novelty, even possibly there may not be much of interest, as local faunas must, to a large extent, be repetitions of each other: still we trust it will be a solid link in the chain, and we have done our best to make the information as accurate as possible.

With a few exceptions, we have personally visited every island of the group. By this we do not wish it to be imagined that such a casual survey makes us complete authorities on the fauna of each individual island, but it has enabled us to form a very good idea of it as a whole. Our numerous correspondents, both residents and visitors, have most ably assisted us, and enabled us to arrive at what we trust will be found a very fair if not thoroughly exhaus-

<sup>1</sup> *Proc. Nat. Hist. Soc. Glasgow*, vol. i. New Series, pp. 44 *et seq.*

tive summary of the whole faunal history of the islands, both past and present.

The Orkney Islands have a long history, and a very large literature, for from very early times they have been of great importance, perhaps more so during the Norse period and down to the fifteenth or sixteenth century than they have ever been since.

Zoology, however, did not flourish much as a science during those stormy periods, though occasional reference to the more important animals occur in the *Orkneyinga Sagas*. Several notes of mammals and birds are to be found in Sibbald's *Scotia Illustrata*, still more in the works of Wallace and Fea. The former of these two latter authors gives many notices of birds, and we are indebted to him for first recording the Roller, Hoopoe and Bittern from these islands, though the last-named bird seems to have been of doubtful occurrence: the description of the Hoopoe is, however, made pretty clear. Eagles are constantly mentioned, and a long list of the breeding-places of the Peregrine is given, when that bird enjoyed royal protection.

It is not, however, until we come to the latter half of the last century that anything practical was done for Natural History. At that time (*circa* 1770) the Rev. George Low, minister of Birsay, encouraged by Pennant, wrote out his *Fauna Orcadensis*, which was edited and published in 1813, by W. Leach, Low having died before he could issue the work himself. Another posthumous work of his is, *A Tour through Orkney and Shetland*, which only came to light in 1879. This *Tour* abounds in Natural History references, and was written in 1774.

In 1812, Bullock made two voyages to the Orkney and Shetland Isles, and wrote several papers in the Transactions of the Linnean Society. He also gave some notes to Montagu which were published in an appendix to his *Ornithological Dictionary*, those concerning the Great Auk being by far the most important. Bullock procured many specimens of birds when in Orkney for his London Museum, as may be seen by a reference to any of the numerous editions of his Guide to that Institution, but he never seems to have published any separate work on the Islands.

In 1837 R. Dunn published his *Ornithologist's Guide to the Islands of Orkney and Shetland*, which contains a very fair list of the mammals and birds, though there are one or two curiously strange omissions. If his statements are entirely to be relied on, the avi-fauna of the islands has much altered within the last fifty years, as will be seen by a reference to the various species. Dunn was more of a collector than a naturalist, and, we are afraid, contributed not a little to the decimation of the rarer birds of both Orkney and Shetland.

Next, and equally important with Low, comes the *Historia Naturalis Orcadensis* of Messrs. Baikie and Heddle, published in 1848, the standard work on Orkney mammals and birds, and to which we so constantly refer in our volume. Only one part of this work was ever published. Seeing that it was written by two Orcadian gentlemen, it is a great pity that it does not contain much fuller information, both as to the records of the, even then, fast-departing eagles, and also of the increase of some species which began to extend their range about that period throughout the islands. There can, however, be no doubt about its usefulness as giving a fair and interesting account of the Orcadian fauna of their day, and from notes we have seen, made by one of the authors, there is no doubt that, had a second edition ever been called for, a great improvement would have been made.

In 1866 Crichton published a small book, *A Naturalist's Ramble to the Orcades*, which contains a good deal of useful information. He added the Honey Buzzard to the Orcadian list, though unfortunately he gives no particulars as to where or when the specimen was obtained. Than this, there is nothing that calls for any special notice.

In 1883 Mr. Robert F. Spence began a history of *The Birds of Orkney*. Of this work 280 pages were printed, which only carries us down to the middle of the article on the Rook. Mr. Spence very kindly allowed us to see the rest of the MSS. and to use it as we liked, as it is very unlikely that the work will ever be finished.

We give here a list of those books and papers which we have either consulted in writing our present volume, or which seem to



us likely to be of special interest to any one who would care to inquire further into subjects more or less connected with it. Our thanks are specially due to Mr. J. W. Cursiter, of Kirkwall, for his aid in making this so complete, but at the same time it must not be looked upon as a Bibliography of the Orkney literature, which subject has been taken in hand for some time back by others more specially interested in that subject.

A.D.

1684. *Scotia Illustrata, sive Prodrumus Historiæ Naturalis Scotiæ.* Roberto Sibbaldo. 1684.

1693. Wallace, Rev. James. *A Description of the Isles of Orkney.* 8vo. Edinburgh.

— Reprint of 1693 ed. 8vo. Edinburgh, 1883.

1700. Wallace, James, M.D., F.R.S. *An Account of the Islands of Orkney.* 8vo. London, 1700.

[This is merely a new edition of the foregoing by the first-named author's son.]

1700. Brand, Rev. John. *A Brief Description of Orkney, Zetland, Pightland Firth, and Caithness.* 8vo. Edinburgh, 1700.

— Reprint. 8vo. Edinburgh, 1884.

1751. *Voyage to Shetland, the Orkneys, and the Western Isles.* 8vo. London, 1751.

1775. Fea, James, Surgeon. *The Present State of the Orkney Islands Considered.* 8vo. Holy Rood House, 1775.

— Reprint. 8vo. Edinburgh, 1884.

1774 (1879). Low, Rev. George. *A Tour through the Islands of Orkney and Shetland.* 1774. 8vo. Kirkwall, 1879.

1775 ? (1813). *Fauna Orcadensis. Circa 1770.* 4to. Edinburgh, 1813. (*Vide* p. 86 of our present volume.)

1791. *Old Statistical Account of the Orkney Islands.* 8vo. 1791.

1805. Barry, Rev. George, D.D. *History of the Orkney Islands.* 4to. Edinburgh, 1805.

— Second edition, with Hendrick's Notes. 4to. Edinburgh, 1808.

— Reprint, with Introduction. 8vo. Kirkwall, 1867.

1806. Neill, Patrick. *Tour through some of the Islands of Orkney and Shetland.* 8vo. Edinburgh, 1806.

1814. Shireff, John. *General View of the Agriculture of the Orkney and Shetland Islands.* 8vo. Edinburgh, 1814.

1814. Bullock, William. *A Companion to the London Museum and Pantherion*. 12mo. Sixteenth ed. London, 1814.
1820. Peterkin, Alexander. *Rentals of the Ancient Earldom and Bishopric of Orkney*. 8vo. Edinburgh, 1820.
1820. Edmonston, A., M.D. *Observations on the Nature and Extent of the Cod-fishery of the Zetland and Orkney Islands*. 8vo. Edinburgh, 1820.
1837. Dunn, Robert. *Ornithologist's Guide to the Islands of Orkney and Shetland*. 8vo. London, 1837.
1842. *New Statistical Account of the Orkney Islands*. 8vo. Edinburgh, 1842.
1842. Wilson, James, F.R.S.E. *A Voyage round the Coasts of Scotland*. 2 vols. 8vo. Edinburgh, 1842.
1843. *Zoologist, The*. 8vo. London, 1843 *et seq.*
1848. Baikie, W. B., M.D., and Robert Heddle. *Historia Naturalis Orcadensis*. Part I. (all published.) 8vo. Edinburgh, 1848.
1862. Clouston, Rev. Chas. *Guide to the Orkney Islands*. 8vo. Edinburgh, 1862. (This forms the Orkney division of Anderson's *Guide to the Highlands and Islands of Scotland*, and contains a list of Orkney Birds, which is, however, of little practical use, though often quoted.)
1866. Crichton, A. W. *A Naturalist's Ramble to the Orcades*. 12mo. London, 1866.
1871. Gray, R. *Birds of the West of Scotland*. 8vo. Glasgow, 1871.
- 1871-84. Yarrell, W. *A History of British Birds*. 4th ed. 8vo. London, 1871-1884.
1874. Saxby, H. S., M.D. *The Birds of Shetland*. 8vo. Edinburgh and London, 1874.
1874. Bell, T. *A History of British Quadrupeds*. 2d ed. 8vo. London, 1874.
- 1879-87. *Migration Reports*. Published by a Committee of the British Association. 8vo. London, 1879-87. 9 vols.
1883. Tudor, J. R. *The Orkneys and Shetland*. 8vo. London, 1883.
1884. Buckley, T. E. *A Few Notes on the Mammals and Birds of Rousay, one of the Orkney Islands*. From the Transactions of the Natural History Society of Glasgow, vol. I. New Series, p. 44 *et seq.* Read April 29th, 1884.
- 1888-9. Saunders, H. *An Illustrated Manual of British Birds*. 8vo. London, 1888-9.

Besides the above works, most of which we have consulted, we have been favoured by the Rev. H. A. Macpherson with the loan of

some letters that passed between E. F. Sheppard (who made several visits to the Orkneys during the years 1839-41) and T. C. Heysham, of Carlisle, for whom the former gentleman collected some eggs.

We have also been enabled, through the kindness of Mr. Southwell, to consult Salmon's Diary of his Tour in the Orkneys in 1831, from the original, which is kept in the Norwich Museum. Besides this we have incorporated into our work anything of value from Salmon's paper in Loudon's *Magazine of Natural History*, vol. v. pp. 415-425, entitled "Observations on the Eggs and Birds met with in a Three Weeks' Sojourn in the Orkney Islands." His stay on the islands seems to have extended from May 30th to June 21st, 1831. Between his diary and the paper just mentioned there are several discrepancies in Salmon's account of the birds he mentions. Take one instance only: the Arctic Gull or Richardson's Skua. In his diary he states that he took a nest in Hoy, while in his paper in Loudon's *Magazine* he says he was too early for eggs—this too on June 14th. We could name other instances, but we think the above will suffice. He says that in those days all the birds were allowed to breed unmolested.

We made inquiries as to whether any ornithological notes had been left by the late Joseph Dunn, and in this search we were much assisted by Mr. Eagle Clarke and Mr. Porritt. Correspondence with some of Dunn's relatives and intimate friends elicited the fact that there were no notes forthcoming, and as all his effects were sold and scattered after his wife's death, if there ever were any they must have been lost. We found that others besides ourselves had been inquiring in the same direction, but apparently with no better results. This is a pity, as with Dunn's long experience of the Orkneys his notes must have proved of great interest.

At the present time there is a Museum in Stromness and an *Orkney Natural History Society*. Mr. S. Brown, the secretary to this Society, kindly sent us a rough list of the birds in the Museum, but, unfortunately, no records of the dates or localities of either these or the mammals have been kept, which much lessens their value, especially when specimens from other places besides Orkney have been admitted.



There was however a Museum in Kirkwall in former days, that must at one time have possessed a good many interesting birds, as will appear from what is mentioned in the body of the work. Like so many other local museums, though started with much vigour, this soon languished, partly perhaps because there was not a sufficient number of people keenly alive to its interest, and certainly it was starved from want of funds, as will be seen from the extract we give from one of Mr. Reid's letters, that gentleman having been instrumental in starting the thing, and keeping it going as long as he could. None of the specimens that the Museum contained can now be traced ; probably not many are in existence.

"I forgot if I ever told you that in 1846, Baikie and Heddle, with myself, moved in forming an Antiquarian and Natural History Society, when all the best people in the islands willingly supported the movement. I had, at that early date, commenced collecting some of the rarer and (more) brilliant birds that came in my way. These I presented to the museum (of) which I became secretary, treasurer, and custodian. I gave a room in my own house, and the Society flourished, being well supported at that time. After a year or so I got married, and soon required the room which was occupied as the museum, and the latter was removed to a larger long loft in Broad Street, where we got a working tailor to keep it, sewing at his work when he could. Well! Baikie and Heddle left the country, and I found difficulties in meeting the expense, and gave up managing the Society, (which), after lingering on for a short time, and the rent of the room not having been paid for two years, broke up, and the whole collection was sold by public roup. During my time of it, I got a great number of birds, from the eagle to the wren. I do not remember having got any specimens of *very great* rarity."

Mr. W. Reid, who has so often contributed to us various notes on natural history, was born in Wick, but went to Kirkwall in 1836, he being then twenty-two years of age, and remained there thirty years, where he was in business as bookseller and stationer. Mr. Reid then returned to Wick, and ultimately settled down at Nairn at the age of seventy.

Our list of mammals includes twenty-nine species. As might be imagined from the nature of the country, we are indebted very

largely for this number to the various species of seals and whales : possibly future investigation may add one or two more of these animals to the list.

Amongst the land mammals three are supposed to have formerly inhabited Orkney, but were exterminated at a very early date—viz., the Reindeer, Red Deer, and White Hare. Since the commencement of this century all these, together with the Hedgehog and Brown Hare (which latter animal we have no reason to suppose was indigenous), were re-introduced *directly* by man. The Reindeer died out, the Red Deer flourished, but had to be killed down for various reasons, but the White Hare still exists in one island, and the Brown Hare, where protected, is sufficiently numerous. The Brown Hare had been previously introduced, but was said to have died out, and again to have been tried with better results : we have no record of when the Rabbit was imported, but it was abundant in 1693. Of the whole number of species included in our list, seven are of doubtful occurrence : two of these are bats, two are seals, one a whale, and the other two are the Water Shrew and the Water Rat. The omnipresent Brown Rat and House Mouse were, of course, inadvertently introduced, but there is no date of when the occurrence took place.

In our list of birds we have included no less than 223 species. Of these the Great Auk is extinct everywhere. The Ptarmigan has been exterminated entirely in the islands ; the Sea Eagle is only now an occasional visitant there ; the Golden Eagle is still rarer. All these were at one time residents, and seem to have been *directly* extirpated by man. *Indirectly*—i.e. by means of cultivation and draining—several species are getting rarer, but this is compensated in some degree by the spread of others which are more dependent on this cultivated area. Of those birds which man has tried to introduce—viz., the Pheasant, Partridge, Red-legged Partridge, and Black-game,—none seem to have thriven, if indeed the most promising of all, the Partridge, has not now vanished like the other three.

Of the whole number, 223, we may take twenty-three species as of doubtful occurrence. Most of these doubtful ones are included in brackets ; the notes to the others will indicate sufficiently those that are meant.

## GEOGRAPHICAL POSITION OF THE ORKNEY ISLANDS AND DESCRIPTION OF THEIR PHYSICAL FEATURES.

THE ORKNEY ISLANDS, separated from the mainland of Scotland by the Pentland Firth, lie between  $58^{\circ} 41''$  and  $59^{\circ} 24'$  north latitude, and between  $2^{\circ} 22'$  and  $3^{\circ} 25'$  west longitude, thus extending over an area of more than 2000 geographical miles.

Including the Pentland Skerries, the number of inhabited islands is twenty-nine, and the number of small islands, called holms, covered with herbage fit for grazing purposes, is said to be thirty-eight, besides the small half, or nearly entirely submerged rocks, called Skerries, which have none.

Shirreff in his *General View of the Agriculture of the Orkney Islands*, published in 1814, gives the acreage of the whole group of islands as about 384,000 acres, of which 84,000 were then supposed to be in a productive state.

With few exceptions, the whole coast-line of the islands is rocky, the highest part being the well-known cliffs of Hoy on the west and south-west. The average height of the sea-cliffs is certainly higher on the west side than on the east, though there are many places on the latter where they rise to a considerable altitude, such as Copinsay, and parts of S. Ronaldsay. Quantities of sea-fowl breed through all these heights; where the ledges are small, narrow, and bare, Guillemots, Razorbills, and Kittiwakes have taken possession, while the greener slopes are occupied by Herring Gulls, mixed here and there with a few Lesser Black-backed Gulls.

Any extent of sandy beach is rare, though there are some patches on the Mainland. By far the greatest extent of such sea-board, however, is at Sanday, but all these sandy reaches are situated either on the east side of the islands, or else in some sheltered bays well out of the reach of the heavy wash of the Atlantic.



There are many large and well-sheltered bays scattered throughout the islands, well suited for wild-fowl, which can shift their locality with ease from one side of the island to the other, according to the wind, but good and safe anchorage for vessels of any size in all weathers is rather scarce; the best of these perhaps are Longhope in South Walls, Stromness and Kirkwall in the Mainland, Kettletoft in Sanday, Pierowall in Westray, and St. Margaret's Hope in S. Ronaldsay.

The most remarkable of all these bays is Deer Sound, which may, however, best be described as bays within a bay, and which, at one point, almost separates the parish of St. Andrews, making one of the portions into an island. This bay is one of the best-known resorts for wild-fowl in the whole of the islands, as there is here a larger extent of shallow water and diversified feeding-ground than elsewhere.

All the islands are divided from each other by sounds, through which the tides run with great force and rapidity, the velocity of some of these streams (or "roosts" as they are locally termed) rising, during spring-tides, to eleven knots an hour, and the noise of these roosts resembles a huge river in full flood. These roosts, too, are very dangerous to inexperienced persons, as the waves rise to a great height, and then either break or seem to fall down suddenly, and, should a small boat get into the full strength of one of these tideways, she will fill and go down. Indeed such an accident happened to a boat we once possessed when in Rousay, and we heard, shortly after our departure, that the two men, to whom she had been sold, got caught in a roost and were drowned, a wave falling into the boat and taking her down.

With experienced boatmen, however, excellent fishing may be had close to the heaviest roost. We have had splendid sport when in the slack water between the two tideways on each side of the island of Græmsay, where, although the water was a little rough, there was little or no current. Here we had great fun with the larger "cuddies," taking in two at a time almost as fast as we could put the flies out, while the huge breakers tossed and tumbled harmlessly, with a thundering roar, on each side of us.

The mountainous, or rather hilly, portion of these islands (for nowhere, except perhaps in Hoy, do the hills attain to the dignity of mountains), is included in the western side of the group. By taking Hoy, the west side of the Mainland, as far as Scapa and Kirkwall, Rousay and the north and west of Westray, we include nearly all the land of any considerable altitude, except perhaps the Ward Hill of Eday. The greatest height of all these is attained by the Ward Hill in Hoy, which rises to 1564 feet.

In former times it would appear that all, or nearly all, the islands were covered with heather, as, even in the most highly cultivated districts, little patches of this plant are still to be found. At the present time, however, the heather is fast disappearing before the rapid strides of agriculture, and it is now chiefly confined to Hoy and North Walls, the central and more hilly districts of the Mainland, Rousay, parts of Eday, and of Westray.

Another cause for the rapid disappearance of the heather is a habit the natives have of stripping the ground with a sharp spade; the part thus taken off being used either for roofing or for fuel. The roots being thus destroyed, the skinned part rarely recovers; an unsightly practice, which we wonder the proprietors allow.

A great impetus was given to Orcadian agriculture about 1832, when kelp-burning became unremunerative, and steam communication with the south commenced. Since then the reclamation of the waste land has gone on to the present time, and now the advance-guard of fields may be seen well up some of the lower hills, the surrounding walls showing by their whiteness their new appearing.

And thus the Grouse, Golden Plover, Short-eared Owl, and other birds, interesting alike to the sportsman and naturalist, are gradually getting crowded out. The draining of the moors drives out the Snipe, once so extremely numerous, while the unnumbered, so-called, shepherds' dogs—most happy misnomer—together with the cats, are sadly reducing the breeding stock of such birds as Lapwings, Ring Dotterels, etc., which once swarmed. Many Orcadian gentlemen have noticed these facts to us, and regretted

them. But when the area is so comparatively small, and the population increases, agriculture *must* push ahead to the detriment of the *feræ naturæ*. Gamekeepers, too, except, we believe, on one estate, are unknown, so the cats and dogs have things pretty much their own way, and the wonder is that so much is left.

Regarding this disappearance of these interesting indigenous birds, we think the following notes from Mr. Watt of Skaill, himself a resident Orcadian, cannot fail to be of interest:—

“The Loch of Skaill, and Bay of Skaill, have, from early observation, been the resort of a variety of birds which frequent the islands, and it is with regret that I have noticed within the last twenty-five years that they are becoming every year fewer, in particular the small waders, which used to go about the sands in large flocks, and among these at times were to be seen some of the rarer kind, such as the Phalaropes, Greenshanks, Ruffs, etc. Phalaropes I have not seen since about the year 1867; they used to breed here. I shot a couple of brace of Knots in 1868 out of a flock of ten, and last summer a friend of mine shot a brace near the Loch of Stenness. In 1884 I shot a Greenshank on the margin of the loch of Skaill, and in October last shot a Reeve. The Turnstones, which between 1863-70 were pretty numerous, I have not seen for years, and sandlarks and Dunlins are in small numbers compared to the flocks that used to frequent our shores. The last two nested close to the bay and loch. The only reason for which I can suppose these latter birds have fallen off in number is owing to the cultivation of their former suitable and quiet breeding-grounds, which has caused them to go further north, probably to the Faroes, and the winters in the north, of late years, having been much milder, there they have remained.<sup>1</sup>

“Snipe, Redshanks, Golden Plover, and Green Plover or Lapwing, were plentiful, but now few; this again is owing to the swamps being drained, and turned into fertile fields.”

As before mentioned, the manufacture of kelp in these islands has much decreased, but still a considerable amount is made,

<sup>1</sup> Of course we do not agree with our friend in all respects, but the decrease in the number of birds is undoubted.



especially in Hoy and the Mainland, on the shores at the mouth of Hoy Sound; and also in Westray and N. Ronaldsay. When just taken out of the furnace, kelp looks very like a cinder, and has a saline taste.

Wheat does not ripen so far north, but oats, bear, and barley, though often very late, give good crops. Turnips, however, and grass, grow well, giving good pasture and feeding for cattle.

Although, perhaps, a minor branch of farming, no notice of agricultural resources in these islands would be complete without mentioning poultry. Without going into statistics, the amount of eggs exported from there is enormous, amounting to thousands of dozens weekly. No wonder that fowls in these parts are often called "the Orkney Bank."

In an abstract rental of the Bishopric of Orkney, *capons* are specially mentioned, and although chickens were only valued at 1d., and poultry at 3d., these are quoted as high as 6½d. each. Since those times, however, the fashion of making capons seems to have died out.

From this extract it would seem that poultry, even in those days, was an article of considerable importance. The large size and good quality of the Orkney fowls has been attributed, and we think with great likelihood, to the abundance of insect life formed by the masses of decaying seaweed lying on the shore, or scattered as manure over the fields, and this must have a great influence on their egg-producing capabilities.

Owing to their being wholly surrounded and so much intersected by sea, and also in no slight degree to the presence of the Gulf Stream, the temperature of the Orkneys is very equable. Great heat, even in the long days in the height of summer when the sun is almost ever present, is unknown, but so again is any intense cold, and it is rare that hard frost lasts for any time, nor does snow lie long. Fogs are more prevalent in the summer and early autumn than high winds. Mr. Tudor, in his *Orkneys and Shetland*,<sup>1</sup> p. 199, remarks that Mr. Scott of the Meteorological Office pointed out to him that the special characteristic of the Orcadian climate is the

<sup>1</sup> *The Orkneys and Shetland*. J. R. Tudor. Stanford, London, 1883. 8vo.

limited range of its temperature throughout the year, which only amounts to  $14^{\circ} 5'$ , in which respect it resembles the west of Ireland and the Scilly Isles. The prevailing winds are from some westerly point, and this may be seen at once from the shape and appearance of the trees, where such exist. As long as they are protected by walls they grow well enough, but immediately they rise above that height the tops are at once cut off, and the boughs and twigs trained in a contrary direction. Each tree thus forms a slight protection to the one to the east of it, so that the furthest east tree is generally the tallest. Besides the actual force of the wind, no doubt the amount of salt carried in the form of fine spray has something to do with their stunted growth. Even the heather on the west side of the hills grows so matted and thick that grouse might almost as easily walk on the top as through it.

Trees formerly grew in many parts of Orkney, and roots have been found in Otterswick Bay, Sanday, near low-water mark. At Millbay, Stronsay, and at Roithisholm in the same island, roots and remains of birch-trees as thick as a man's thigh, with the bark quite bright and entire on several parts of the tree, have been dug up. We ourselves have seen remains of trees beneath high-water mark, below Westness House, Rousay, proving that the sea has encroached there within comparatively recent times, as it has at Otterswick, Sanday. Mr. Moodie-Heddle informs us that a very few years ago there were still standing the remains of some sort of fir-tree at the point of North Ness, at the entrance to Longhope in Walls, which was tall enough to be quite a mark for vessels. Trees also existed in other parts of Hoy, remains of which are still found in the bays: and at Berriedale, near Rackwick, small trees of willow, with birch, ash, and hazel, still grow along the edge of one of the burns there, and to these Neill refers in his *Tour*.<sup>1</sup>

At the present time trees are only to be found, with the exception of those in Hoy just mentioned, in small plantations, near, or round, the residences of the gentry, and in many cases these are by no means as well looked after as they might be.

<sup>1</sup> *A Tour through some of the Islands of Orkney and Shetland.* Patrick Neill. Edinburgh, 1806. 8vo.

This, however, might well arise from the expense of planting and replanting; and, seeing that no remuneration can possibly be expected for all the outlay, no tree at the present time being of any use for timber, or likely to be, and that these plantations are only of use as affording a little shelter to the houses, and for ornament, they can perhaps only be regretted from an ornithologist's point of view, as, by their attractions, increasing the number of species both resident and migratory.

Hardwood trees, such as plane or sycamore, mountain ash, and wych elms are the common trees here, the first named being *the* commonest, and found round every house where there is any plantation at all.

No species of fir or larch seems *now* able to stand the climate. This we noticed particularly in the plantation at Muddiesdale, close to Kirkwall, one of the largest in the district; as here, all the larch, and nearly all the firs, were dead or dying, the former being covered to an inordinate extent with lichens.

Perhaps the largest planted area is that round Balfour Castle, on the island of Shapinsay; others of large extent exist at Birstane on the Mainland, at Westness in Rousay, and at Melsetter in Hoy.

The largest trees are those about the Earl's and Bishop's Palaces in the town of Kirkwall, where they have the most protection from the wind: but, on the road leading up to the Gallows Hill, we noticed that all the trees along the roadside were dead or dying.

Of rivers proper Orkney has none, though there are plenty of small burns, many of which are so obstructed by mill dams as to be of little practical use for fishing purposes. Of these burns, Berriedale in Hoy; the burn that flows through Durka Dale; the burn of Orphir, and Græmeshall burn on the Mainland; and Sourin in Rousay, are the most important.

In lochs, however, Orkney shows more favourably; and there are few islands, except perhaps Shapinsay and Flotta, that have not one or more, some of considerable size, such as Stenness and Harray on the Mainland. Many of these contain trout, and some of very large size, as witness the one caught at Loch Stenness, in October 1888, which weighed 30 lbs.



The Orkneys are divided into three groups, South, West, and North. All the islands lying to the south of the Mainland, of which Burray, South Ronaldsay, Hoy and Walls (these two being one island), Flotta and Græmsay are the principal ones, are included in the South Isles. The West Isles include Gairsay, Viera, Egilsay and Rousay; while the North Isles comprise Stronsay, Sanday, Eday, North Ronaldsay, Westray, and Papa Westray.

Pomona, the largest of the group, is not known to the inhabitants of the islands by any other title than that of the Mainland, and we wish our readers to understand that this meaning of the word holds good through all the text unless it is specially mentioned to the contrary.

It can easily be understood that a description of such well-known, and for the most part, highly cultivated, islands as the Orkneys, which are, or were, yearly visited by crowds of tourists, cannot prove of nearly the same interest as the wild outlying and scarcely visited islands of the Outer Hebrides. For one person who has visited North Ronay, Mingulay, etc., there are a hundred who have seen most of the Orkneys, and to describe the former is almost like writing a chapter on a newly found country, while Orkney has its guide-books, and, from its unrivalled archæological remains, has been explored from end to end.

In its rock scenery, however, Orkney comes well to the front, and few of the principal islands are without some picturesque bit of coast-line. There are few people who have not heard of the Old Man of Hoy, and many of our readers will have seen the magnificent rocks of that island. Less known is the rock scenery of Rousay, Westray, and Papa Westray, which, though by no means equalling the best that Hoy can produce, are still worthy of notice, teeming, as most of them do in the summer, with bird life of many kinds.

Bearing this in view, we have not considered it necessary to go into details of each island at any great length, excepting when particular interest attaches thereto. We have given our own experience of them, more from an ornithological point of view than any other, for more details referring our readers to Mr. Tudor's exhaustive work.

## THE NORTH ISLES.

### NORTH RONALDSAY.

THIS island is one of the smallest of the principal ones, being only about three and a half miles long by one and a half at its broadest part. Besides being the most northerly of the group, it is also the lowest lying, being only some fifty feet high at its greatest elevation. It possesses no sea-cliffs at all, the beach being composed of shingle, well worn and rounded by the action of the waves, with patches of sand here and there, which latter is apt to drift a good deal. The foundation, so to speak, of the island, is rock.

The soil of North Ronaldsay is light, but the whole island is well cultivated, and gives fairly good crops, the grain being principally a native black oat.

Though only separated from it by a narrow firth, the climate is said to be milder than in Sanday, and Mr. Harvey told us that the late Dr. Traill, who was an excellent botanist, could grow plants that required a comparatively warm atmosphere—as, for instance, the New Zealand flax—better at Holland House, his residence there, than in Sanday.

There are four small lochs in the island, but they contain no trout, their bottoms being excessively muddy, which gives a decided tinge to the water. Their edges are in places covered with reeds and coarse herbage, the resort of Dunlins, and in some places the surface is covered with a plant bearing a pretty white flower.

One of these lochs is so overgrown with reeds and rushes that there is little or no water visible. We saw a few Wild Ducks in some of the little open spaces at the edge, but the whole of the centre was occupied by one of the largest colonies of Black-headed

Gulls we have ever seen. There seemed to be thousands of them, as they rose screaming at our approach; but, even if we had been so minded, it would not have been easy to get to the nests, as the ground was very boggy.

The whole island is surrounded by a dyke to keep the native sheep, which are here more abundant than in any other island, out of the interior, the most of which is under cultivation.

Kelp-making is here conducted on a rather more extensive scale than is customary in these days. The time for burning the ware commences about the middle of May, and thereafter during the fine days of summer the smoke arising from the furnaces is quite a characteristic feature of the place.

In the *New Statistical Account* it is reported that after a north-east gale many strange birds are occasionally found here, such as the Goatsucker, Golden-crested Wren, Cuckoo, and Snowy Owl.

Lying almost due north of the island, and only a few hundred yards from it, is the Seal Skerry, the resort of the Great Grey Seal, and of Cormorants, which here nest in some numbers. The Skerry is nearly divided by a geö which runs north and south, and in which there is a very considerable depth of water. Harvie-Brown landed on the Skerry on July 2d, 1889, and after looking at and determining the species of Seals, he went to visit the cormoranty, of which due mention is made later on.

This is the only regular breeding-place known to us of the Grey Seal in the islands, and it is remarkable on that account alone.

## SANDAY.

The island of Sanday lies to the north-east of the Mainland of Orkney. It is bounded on the north by N. Ronaldsay and its firth, on the east by the North Sea, on the south by Sanday Sound and Stronsay, and on the west by Eday and the North Sound. The greatest length of the island is twelve miles from north-east to south-west, and its breadth varies from half a mile to two miles, its whole surface containing about 12,000 acres,



of which four-fifths is under cultivation. There are two inland seas, and the inlets and outlets to these are called "oyces." There are several large bays also, so that the island shows a considerable extent of coast-line. The tideways and currents running round the island, though rapid, are not dangerous, except in stormy weather, and the boatmen very often turn them to good account, by entering into them in order to expedite their passage.

The climate is mild and healthy. There is not much snow or frost, and the inhabitants generally enjoy good health and long life.

In three or four of the bays are found large quantities of shell-fish, principally cockles and razor-fish or spouts. There are several lochs, two or three of pretty large dimensions, but the only fish they contain are the Common Eel and a species of Stickleback. Some of the lochs are bordered with rushes and reeds, in which the Coot, Water-hen, and some ducks and gulls breed.

Sanday is divided into three parts or parishes—the united parishes of Cross and Burness, and Lady parish. The parishes of Lady and Burness may be characterised as of a low flat surface in general, but Cross, lying in the south and west, is more diversified, having some elevations about 250 feet above sea-level. The soil is to a large extent of a sandy nature, which most likely originally gave birth to the name of the island. The seashore on the east of Burness and Lady is in general a low-lying sandy beach, where bent grass grows freely; but around Cross and on the west of Burness it is mostly rocky, with precipices and curious caverns, where the Rock-doves live and breed, and also a great number of sea-birds. The rocks here are mostly of a secondary nature; there is a little limestone, and on the west side, facing Eday, sandstone and sandstone flag is found. On the west shore of Cross parish there is a curious rock called "Heelabir"; it partly consists of a great many pieces of rounded sandstone and quartz, from half an ounce to several pounds in weight, attached to its surface. There is also to be seen near Scar House a large primary rock of several tons weight, which formerly lay near Saville; there is no rock of the same kind to be found nearer than Stromness, from which it is distant some thirty miles, N.N.W. or thereby.

There is a number of ruins, chiefly on the nesses or headlands of the coast, which are supposed to be the remains of Scandinavian buildings, such as broughs or forts, round towers, and tumuli, many of which have never been examined.

There are no trees or bushes here except in gardens, and these grow only as high as they have shelter, owing to the sea-spray, which, in a storm, either injures them or kills them altogether.

For the foregoing account we are largely indebted to Mr. Harvey of Lopness, who has also very kindly furnished us with an account of the fauna of the island, of which he has a very good knowledge.

To Mr. Harvey's account we may add, that in the *New Statistical Account*, published in 1842, it is said that "for at least thirty or forty years back every farmer who had the opportunity was inclined to take in the waste land in the parish of Lady (the eastern portion of the island). Before that time it was considered impracticable, but now it seems as if in a few years' time there will be no waste land in the parish."

One of the things that struck us most as we passed along the east coast of Sanday was the dazzling whiteness of the sand, which was quite different from many parts of the east coast of Scotland which we have visited, and where the sand is much browner. We anchored the yacht in Otterswick, which is well sheltered from nearly every wind that blows; in the bay we saw what we took to be a Black-throated Diver, a rare bird in these islands. We walked through all the north-east end of the island, the road running behind the sand-hills, which here fringe the sea-coast. The Start Lighthouse is situated on a peninsula, which is joined to the island by a slightly raised gravelly beach. On interviewing the lighthouse-keeper, and asking him if he received the Migration Schedules, he said he did, but so few birds struck the light they were not worth recording. He complained, however, of the number of Starlings, which made a filthy mess of his lights. He put down the paucity of bird-life there to the fact that the light is fixed red. He told us that many Sandgrouse had been about, but that all had left; however, we subsequently saw some ourselves there, flying south-east.

With the exception of some shallow lochs, some of which were

nearly dry on this occasion, and the adjoining marshy ground, and the land immediately adjacent to the shore, the whole island is cultivated. The marshes were full of bird-life—Sheldrakes, Wild Ducks, Coots, Peewits, Dunlins, and Terns, being everywhere present; all the terns we could identify were Arctic. We picked up the wings of a Purple Sandpiper, and a Pintail drake, neither of which are considered common birds there.

The highest part of the island lies to the south-west, and here the rocks, though by no means lofty, have steep, grassy slopes, ending in short precipices, which afford hiding-places to a good many sea-fowl, especially Black Guillemots. The lochs have the same characteristics as those we described in North Ronaldsay, but are of greater extent; Coots are very common on them.

Sanday has long held the position of giving more rare birds to the Orkney fauna than any other island perhaps in the group. A reference to Messrs. Baikié and Heddle's book will show this, and how the ornithology of the islands is indebted to the exertions and accurate observations of the late Mr. Strang of Lopness. Mr. Harvey, who succeeded that gentleman to the same farm, seems also to be possessed of the same tastes, and has added one or two more birds to the list, notably the Nutcracker.

Mr. Denison of Brough has a very interesting collection of birds, mostly taken on the island, which he was kind enough to show us, and from whom we got one or two interesting facts.

### STRONSAY.

This island is much more interesting to the agriculturalist than the ornithologist, nearly the whole of it being devoted to cultivation, with the exception of one considerable stretch of ground in the south-east. This part of the island, which is called Roithisholm (pronounced Rousholm), we explored, but unsuccessfully, in search of Whimbrels. The centre of this area is covered with stunted heather, and contains a certain amount of peat; the rest is covered with grass, which gives good grazing for sheep. From the narrow neck between St. Catherine's Bay and the Bay of Holland the land rises gradually, and terminates at Roithisholm Head in



some steep rocks, which are tenanted by Shags, Cormorants, Herring Gulls, a pair or two of Great Black-backed Gulls, and a like number of Hooded Crows, which latter do an immense amount of damage to the Shags' and Cormorants' eggs, the grass above the ledges being covered with the shells. Two or three pairs of Golden Plovers, some Eider Ducks, and a few Meadow Pipits breed among the heather.

Low in his *Tour*<sup>1</sup> mentions Stronsay as being "more unequal and moorish (than Shapinsay), full of moss and peat, except along the shore, where the ground is cultivated." In this respect it differed from Sanday and North Ronaldsay, which are so destitute of native fuel that those who could afford brought their peats from Eday, while the poorer class burnt cow-dung and dried tangle.

Off Stronsay, to the north-west, lies Linga Holm. This island is all grass, the best parts being those at the north and south-west ends. The centre is rather swampy, and round this the grass grows in large tussocks, which afford excellent nesting and hiding-places for the different birds that breed there; indeed Linga Holm was one of the best places we have visited either for numbers or variety of birds. The beach is mostly shingle, but immediately below that the rocks appear, especially at the south end, where they form a convenient resting-place for the Common Seal, which is here found in some numbers. The rocks and shoal water here extend out for a long way towards Stronsay, and it is necessary to give this part a wide berth when sailing up to Linga Sound. At one time the island was inhabited, but there are no inhabitants there now, and it is used entirely as a sheep farm. We found all the usual birds here in abundance, especially Eider Ducks and Sheldrakes, and in a small pool close to the sea, a Coot, one Wild Duck, and three Teal—this latter is a rare bird during the breeding season in the Orkneys. There was also a flock of about twenty Curlews, which, however, would be non-breeding birds, or possibly migrants at that date (July 3d). Many of the birds were still on their eggs; and the crew of the yacht brought in a quantity of the different kinds, most of which proved to be very near hatching, to their great disappoint-

<sup>1</sup> *A Tour through the Islands of Orkney and Shetland in 1774.* George Low. Kirkwall, 1879. 8vo.

ment. On one part of the beach were quantities of whales' bones, probably the result of some former whale hunt. There are a few Rabbits on the island.

There are also several small holms lying between Sanday and Stronsay, such as the holms of Spurness and Huip, but these, owing to pressure of time and the want of good anchorage near at hand for the yacht, we were unable to visit personally.

### EDAY.

This is one of the principal islands we have not personally visited, but in regard to its avi-fauna we regret this the less, inasmuch as we have been furnished with notes thereon by Mr. Ranken, a brother-in-law of the proprietor, Mr. Hebden, all of which are entered in their proper place. Eday was at one time almost entirely covered with heather, and its large peat banks supplied the neighbouring islands of Sanday and North Ronaldsay. Now, however, the heather has largely disappeared, giving place in the south-east to fields so large and well cultivated that the skipper of the yacht remarked as we sailed past that they were "as good as the Lothians." This change accounts for the gradual decrease of the Grouse, and the total disappearance as a breeding species of Richardson's Skua; for, whatever may have been the case when Salmon and Dunn visited these islands, Mr. Ranken has frequently assured us this bird no longer breeds there now.

Numbers of birds, however, breed on the Calf of Eday, an island of some 500 acres, and on the Red Head, which latter, 200 feet high, takes its name from the red-coloured sandstone of which it is composed. The island itself is of irregular shape, and, with the Calf, which is only a few hundred yards from Eday, contains about 9000 acres.

Mr. Ranken sends us the following notes on the geology of the island:—

"In its structure, from a geological point of view, Eday is comparatively simple, consisting of a well-defined basin occupied by a series of extensive yellow and red sandstones, resting conformably on flagstones of a grey or rusty colour. Both on the east and

west side of the island the shore section plainly shows the conformable passage of the flagstone into the outlying arenaceous series, and, on the eastern shores especially, can be plainly seen the inter-stratification of the flagstone, with bands of laminated sandstone. About half a mile from the entrance to Calf Sound, approaching from the south-east, an interesting fault may be observed: the flags forming a low arch on which the coarser-grained sandstone rests, and again, a little to the north of the point of Veness, the flagstone is even more abruptly terminated, bringing down the overlying sandstone to the west. Few fossil remains are found in Eday.

“The sandstone strata form prominent hills both in the northern and southern portions of the island, the beds of which are either extremely coarse-grained or frequently conglomerate in their character. The centre of the island being low, and only a few feet above high-water mark, there is some risk of its being cut in two in the course of time by the encroachment of the sea acting on the sandy soil on both sides. The sandstones of Eday are remarkable in very closely resembling the upper old red sandstone as seen in Hoy, but it is generally accepted at the present day that they form part of the flagstone series, and therefore belong to a more ancient period.

“The greater portion of Eday and the whole of the Calf are occupied by these sandstones, which rise at the Red Head in the northern extremity to a height of 210 feet, forming that bold and precipitous headland and well-defined landmark. The cliffs on the north-eastern exposure of the Calf, though not so high as the Red Head, are much indented by the action of the sea, and are called the Grey Head. These headlands, with their remarkable colouring, are very fine and picturesque, especially when viewed from the sea, and are quite the finest rock scenery in the North Isles. About half a mile south from Carrick there is a solitary standing-stone, which, seen from Carrick Bay, looks not unlike a schooner ‘running free’ in the distance. There are three lochs in the northern portion of Eday, two of which are quite shallow though of considerable extent, and being innocent of fish, except perhaps a



few eels, and almost free from weeds and herbage, afford but little feeding-ground for birds. A few Swans, Golden-eye, Widgeon, Teal, etc., frequent them and the small adjoining deep loch, Dooney, in winter.

"Owing to the porosity of the subsoil, there is but little marshy ground in the island, and consequently little running water, nor are springs abundant.

"The Eider and Sheldrake, the Greater and Lesser Black-backed, Herring and Common Gulls, Oyster-catcher, etc., breed in considerable numbers on the Calf, and on its ledges large numbers of Cormorants, Guillemots, and Kittiwakes nest annually."

### NORTH FARA.

Lying between Eday and the south of Westray are Fara and its Holm, which are connected at low water. Fara itself is wholly cultivated, and neither of the islands possesses any interest to the ornithologist. The Holm is covered with grass growing on a dry bed of peat, but the people of Fara are now rapidly paring it off for fuel, which will soon make the Holm nothing but bare rock and sand. A few gulls, Twites, Starlings, Black Guillemots, and one Eider Duck with one young one, were all the birds we saw. On the Red Holm, on which we could not land on account of the weather, a great number of Cormorants were resting.

### WESTRAY.

Westray has some of the finest rock-scenery in the North Isles. Noup Head, the north-west point, stands well out into the Atlantic, and it is a fine sight to see the rollers sending their spray far up its height after an autumn gale, even from such a distance away as Rousay, as we ourselves have witnessed. To see these islands properly they should be viewed from a boat as well as from land, and this, unfortunately, time did not permit us to do, so we preferred to keep upon *terra firma*.

There are three or four hills in the island, the highest, Fitty Hill, being 556 feet, the others varying from 250 feet to 350 feet. Roughly speaking, the whole of the island to the south-east of Pierowall is cultivated, the rest bare moorland and grass. Leaving the road that runs due south from Pierowall, the town of Westray, just opposite the foot of Fitty Hill we come almost immediately on to the heather, which occupies the slopes and bases of all the hills, it being of a better quality on the east side, where it is sheltered from the westerly gales. At the same time, though there are no Grouse resident on the island, a few, we are given to understand, are occasionally driven across from Rousay in the winter. Numbers of Lapwings breed on the heather at the base of the hills; further up we found a few Common Gulls and Golden Plover, and a Wild Duck was flushed off her nest. At a small marshy loch a pair of Black-headed Gulls seemed, by their actions, to be breeding. Elsewhere the ground was covered with grass, and in the damp hollows there was abundance of cotton grass. On the west side many places were blown bare or cut up into channels by the heavy westerly gales. Here and there, where there was a little moisture, the runs of the Field Vole were visible. Above Noup Head the ground is again covered with a sort of stunted heather; and on the rocks are colonies of rock birds and some Herring Gulls, but we did not notice any Shags or Cormorants, and Puffins were scarce. We saw four Ravens, probably bred about the rocks in the Head; these are by no means common in Orkney.

Another day we went round Bow Head, and on our way thither passed a large number of kelp-furnaces, which seemed, from personal observation, the largest manufactory of that article in the islands; the smell from the heaps of rotting seaweed was most disgusting. With the exception, perhaps, of a few Rock Pigeons, no birds breed on the Bow, and even at Noup Head the greatest number of rock-birds seemed to be on the west side. The rocks at and around Bow Head appear to be not more than from 80 to 100 feet high; the tops next the sea are perfectly bare of everything for some 40 or 50 yards inland, at which distance there is a regular beach of stones, which shows that the sea must wash over

the cliffs with sufficient force to throw all the stones back to form it. Beyond this distance the Sea-pink grows more luxuriantly than in any other of the islands, and it is rooted in nothing but rocks and stones, which constitute the formation of the headland. The rocks themselves are of a peculiarly laminated character, the lamination being almost entirely parallel. The lower part in many places has been washed away, leaving an overhanging cliff. In other places the sea has formed natural arches, or, the whole of the upper part having been washed away, a long reach of gently shelving rock, perfectly bare and smooth, has been left. At the Bow, we saw a pair of immature Merlins and a Curlew, and, on our way back, a single Swift. The predominating species of small birds were Sparrows, Larks, a few Twites, Starlings, and Wheat-eats, the two first named being the commonest. Buntings, if not altogether absent, are rare in the Westray group.

There are two lochs in Westray, both of which are said to contain trout, and are connected by a small burn. The upper one—Burness—is overgrown with reeds, and there are a good many Coots on it, and the Little Grebe is said to breed there, which is likely enough, although we did not ourselves observe any.

A little to the north-east of the Bow lies the holm of Aikerness, a long, bare, stony island, with a little grass at the north end. We observed no birds on it, nor seals, but a few terns were fishing close by. In the winter, however, it is at times visited by large flocks of both Wild Duck and Widgeon.

### PAPA WESTRAY.

The name of this island must always be connected in an ornithologist's mind with one bird principally, and that the Great Auk. The connection will be found fully discussed under that bird.

The island itself presents no points of particular interest, except the rock-scenery, a description of which we quote from Harvie-Brown's Journal further on. Nearly the whole area, the exception



being a small portion of the northern end, is cultivated; the southern and eastern sides are low and sandy; but the west, north, and north-east are rocky, and the island attains its greatest height at these points. The uncultivated area is covered with very short stunted heather, in places barely discernible through the coarse grass. Numbers of the common waders breed in this uncultivated tract, and on the grassy height and on the rocks below we saw the largest collection of gulls of different species that we met with anywhere in the islands, all, as far as could be seen with a glass, immature—most of them in the nearly adult plumage. At Fowls Craig there are some Guillemots and Razorbills, and a colony of Kittiwakes. Other birds were Larks, a few Wheatears, Corn-crakes, Rock Pipits, Starlings (not so numerous), but Sparrows in numbers. No Eider Ducks were seen here nor on the Holm, next to be described.

“The lamination of the pavement-like sandstone is perfectly horizontal throughout the whole length of the cliffs—about  $\frac{1}{4}$  mile, and say 50 feet in height—the top courses are furthest out over the sea, each succeeding layer and each succeeding ledge, so formed, being rather less, until the sea is reached, the top thus overhanging by at least from 12 to 15 feet. On the ledges is a very extensive colony of Kittiwakes; and a more lovely one, taken with its full surroundings, or one more perfectly disposed in absolutely parallel and horizontal and equidistant ledges, it would be difficult or almost impossible to conceive.

“At sea-level this pavement sandstone cliff is tunnelled by innumerable caverns and arches, all running at the same angle of from  $20^{\circ}$  to  $25^{\circ}$  with the general face of the cliff, and forming, with the projecting portions of the cliff, a marvellous succession of almost perfectly equidistant buttresses lying in a north-easterly direction; so that, rowing along from a southerly direction, not one cave is visible, naught but apparently continuous lines of horizontal and parallel strata; whilst, if approaching from the opposite direction, a wonderful procession of arches and caves and buttresses is visible throughout the whole length, and, at the same time, above the caves, the regularity of the ledges and projecting sand-

stone strata is uninterrupted by crack or crevice. The caves are very much the same in size and height, and in width and depth, and are, perhaps, about 15 feet high, thus occupying, roughly speaking, about one third of the total height of 50 feet.

"There appeared to be no place where we could land and take a photograph, as the buttresses are all upon absolutely the same plane of projection, so we had to be content with the view direct from the boat. It would have been equally impossible from the top of the cliff, owing to the great overhang."—(From J. A. H.-B.'s Journal, July 1889.)

On the south-east side, below the Holm, is St. Tredwall's Loch, a good-sized sheet of water, with a few terns apparently breeding about its edges. The only other bird we saw on it was a Redbreasted Merganser. In the marshy ground round it were a few Dunlins, and a pair or two of Redshanks. The loch is separated from the sea on its east and south sides by a sandbank.

### HOLM OF PAPA WESTRAY.

The Holm of Papa Westray lies about three-quarters of a mile from the eastern centre of Papa Westray. The channel between the two islands is quite shallow, and, from the lowness of the land opposite, they would appear to have been connected at no great distance of time back. To the north, east, and south-east, however, the land is higher, and is bounded by cliffs, though none of these are of any great altitude. These cliffs have the same laminated appearance as those of Papa Westray itself, and, like them, are tunnelled with caves, or pierced by geös. Great numbers of Black Guillemots inhabit the rocks on the south-east, and indeed they seemed to be the most abundant species in the island. Mr. Traill of Holland used to preserve the island very strictly, the birds not being molested except at certain times. Since it has passed out of his possession things are changed, and the day we landed on it (June 22) all the nests had been robbed, as we found scarcely any eggs or young birds. All the terns we could

identify were Arctic; one of their nests contained three eggs, a by-no-means common occurrence in Orkney in our experience. There were also one or two pairs of Great Black-backed Gulls, a small colony of Herring Gulls in a geö, a pair of Twites and Hooded Crows, and a good many Oyster-catchers. There were three or four Curlews, which did not seem to have been nesting, however; only one wild duck was seen, apparently a common Wild Duck; no Eiders nor Common Gulls; a white pigeon<sup>1</sup> was sitting on some ruins, and, judging by the quantity of droppings, these ruins are frequented by a good many Rock Doves. All the Shags and Cormorants we saw were merely sitting about on the rocks, not nesting there.

There is no cultivation on the Holm, which is covered with grass, and used as a sheep-farm; nor are there any inhabitants.

<sup>1</sup> Possibly an albino Rock Dove.





## THE WESTERN ISLES.

### ROUSAY.

THIS island, lying north of the Mainland, and separated from it by the Sound of Eynhallow, is of considerable extent, containing in all about 15,000 acres. A very fair proportion is cultivated, and besides, on the south and west, there is a large extent of good green grazing ground. There is an excellent road running all round the island. The whole of the coast-line is rocky; low, and mixed with patches of rough shingle on the south and east, and on the north and west rising to cliffs of considerable altitude. These cliffs afford nesting sites for a goodly number of rock birds, some Rock Pigeons; and in one place a pair of Peregrines are continually seen, though the nest has not been discovered. A detached stack of rock, called the Lobist, on the west side, is covered on the top with nests of the Herring Gull. A peculiarity of the shingle is that it is composed of flat stones, and this apparently arises from the fact that the rock from which the shingle originated is very soft, and easily split into large slabs, which again break up into smaller, but still flat, pieces. These large slabs are much used for roofing cottages. Inside the cultivated area, which naturally lies near the coast, the ground is heathery, and rises to a height of between 800 and 900 feet; most of this is good grouse ground.

Rousay contains six lochs, but three of these are small and of no interest; the other three, however, all contain trout of good quality. Two of these lochs, in the centre of the island, called the "Muckle" and the Pirie" waters, are connected, and a burn runs out of them into the sea at Sourin on the north side of the island. The third, called "Wasbister," is low down, very near the sea-level, and only about 150 yards from the sea itself; a small burn runs out of it into the sea, but, like the burn that runs out of the other

two lochs, sluices for the mill-leads pretty effectually prevent the sea-trout from getting access to it. Though large sea-trout enter the Sourin burn, these are generally poached by people who are on the watch for them, and the only one we ever caught on the island was about one pound weight, and not far from the sluice on the Muckle Water.

The house of Westness is remarkable for being surrounded by perhaps one of the largest, if not the largest, plantations in the Orkneys. The trees are principally sycamore and wych elms, but they are bent and stunted by the salt-laden strong westerly gales, which would never allow a thing to grow at all were it not for the protection of a high wall, and it is only towards the centre of the plantation that the trees attain to any size. None of the coniferæ seem to thrive at all—in fact, scarcely even start a growth. Yet that trees did flourish naturally at one time is evident by the remains that exist on the west side of Westness, where, when the tide was out, under a very thin layer of sand, we found peat, and in it the remains of their roots. Naturally this plantation is a great attraction to the small birds, who build and roost there in numbers, though the absence of Chaffinches, except as winter visitants, is not a little remarkable.

Often as it has been described, yet to a lover of nature there is always something new or grand in looking upon such an ocean as the Atlantic, and when a heavy sea was running we have often gone to Scabra Head, near Westness, as close to the cliff-edge as we dared, to see the breakers coming in. This was not always an easy matter, as, although the cliffs are some 80 or 100 feet high, the spray was so thick and heavy as to drench one in a moment. Choosing a spot where the full force of the Atlantic breakers was somewhat broken by an intervening rock, we would sit down and enjoy the sight, though the earth shook with the concussion of each huge wave. It was very interesting to watch the Cormorants and Shags not far from the foot of the rock; just as a huge green wave was apparently about to immolate them, the birds dived and were seen the next minute swimming quietly in the trough between it and the next roller. This was

more frequently seen, however, *after* the storm, and when the waves, though still almost equally high, were less broken.

One of our pleasantest reminiscences of Orkney is a voyage we made in a small boat round Rousay. The day was really fine, with a suitable breeze and tide, and we saw the rock-scenery under every advantage. Round Scabra Head are some fine natural arches and buttresses, the home of Guillemots and Razorbills. Beyond this the shore is low and rocky, but a little further on it rises rather abruptly, until one comes to Bring Head, and still further on to Hellia Spur, the highest cliffs of all. Here there is a very fine, large colony of rock-birds, certainly the best in the island. The top of the Lobist, a detached stack of rock, is covered with Herring Gulls, the sides being inhabited by Razorbills and Shags. Further on we come to a set of fine natural caves called the Sinians of Cutclaws; these terminate inland in those curious openings called groups or blow-holes. Round Sacquoy Head are some awful-looking geös, but these and the rocks, almost until Saviskail Head is passed, are inhabited only by Rock Pigeons and a few Shags. Shortly after passing this Head the shore again lowers until, at Saviskail itself, the short burn that connects Loch Wasbister with the sea is reached; here some fishing-boats are hauled up. Faraclet is the next high cliff, dark and lowering, and, from its sheerness, looking higher than it really is; Cormorants and Rock Pigeons are its principal inhabitants. This headland ends the high cliffs, and we pass by Scockness, well sheltered from the westerly gales by the land sloping down from Faraclet heights.

We visited both the Holm of Scockness and Kili Holm, and found plenty of birds breeding there, such as Sheldrakes, Eider Ducks, Corncrakes, Snipe, Dunlins, etc. The Holm of Scockness is sandy in the north-east, and there are some rabbits there.

#### VIERA.

This is one of the smaller islands, being about two miles long and one broad in its widest part, and is nearly all cultivated, with the exception of the west end, where there is some marshy ground



and a small loch. At this end Dunlins breed abundantly, also a colony of terns and a few Oyster-catchers. It was here too we saw one of the only two Grey Seals observed by us during our residence in Rousay. The island itself is rocky on the east and south sides, though nowhere are the rocks higher than a few feet: the north-west and west sides are shingly, and on the north-west promontory is a very old cod-drying establishment, still used. It is not every shingle that is suitable for this work, for, besides being exposed to the air above, the fish must have some draught below them as well, and for this purpose the coarse shingle is well adapted. The fish—Cod, Ling, and Torsk, or Tusk, as it is more generally called—are caught a little beyond the Westray Firth, in small smacks of ten, fifteen, or twenty tons. Numbers of Golden Plovers come here in the winter—so the keeper informed us—and at times a fair number of Snipe. The channels round Viera are mostly very shallow, except between it and the island of Egilsay.

### EYNHALLOW.

Eynhallow is the property of E. S. Cameron, Esq., and lies between Rousay and the Mainland in the sound to which it gives its name. The tides here run with great speed on either side of the island, and, even in calm weather, can only be crossed, except in certain places, at high and low water. When in full force, boats can only cross above or below, and in going outside the islands care must be taken to keep on one side or other of the stream. The island is mostly rocky; on the north-west side, facing the Atlantic, the cliffs rise to about 200 feet in height, and these are inhabited by a few Shags, Rock Pigeons, and a pair of Kestrels. These rocks slope down on the west and east sides until at the south end they are level with the water, ending in a long reef of rock covered at high tide. Along the lower sides are heaps of shingle, and above the shingle some larger slabs of stone, under which the Black Guillemots and Starlings build, and in two places the former birds breed in quite small colonies. The island, like so many of the smaller holms, is covered with a coarse grass, to

which at one time sheep, cattle, and horses were brought across to feed. The southern end of the island once contained inhabitants, but all, or nearly all, of them having died of fever, it has since been deserted. Rabbits are very abundant. Since the island came into the possession of Mr. Cameron it has been very strictly preserved. The consequence of this is that birds have increased vastly in numbers, and at the time of our visit Eiders might be seen in every direction sitting on their nests. The Common and Black-headed Gulls have also established good-sized colonies, the latter breeding—in almost quite dry situations—in the stunted heather and short grass, their nests showing no difference from those of their neighbours—the first-named birds. Before they were preserved, the birds, as elsewhere, were systematically robbed, and when we were there in 1883, the Eiders were quite rare birds by comparison.

#### GAIRSAY.

Lying almost due north of Kirkwall, this is the first island met with when going in that direction. It is small, being only a mile and a quarter long by about three-quarters of a mile broad on the average, but the ground rises to a considerable height. Although, as usual, the shores are mostly rocky, these nowhere rise to any altitude, and they afford no great attraction for any species of rock-bird. On the north side are some quiet bays, where we have seen a good number of Wild Duck and Widgeon, there being good feeding-ground for them there. Sweyn Holm lies to the north-east, and a visit to it in the breeding season is of great interest, from the variety and number of birds breeding there. Snipe and Eider Ducks are very numerous, besides an abundance of Redshanks, Terns, Shel-drakes, etc. Between Gairsay and Shapinsay are some skerries, mostly covered at high water, but upon which, as the tide ebbs, numbers of the Common Seal assemble.

#### EGILSAY.

The island of Egilsay lies to the east of Rousay, and is about three miles long by one broad on an average. The sea-beach is

mostly rocky, but above high-water mark on the east side are some sandy hills, and sandy ground covered with a short, sweet grass, and inhabited by a few Rabbits. At the south end is a low reef of rocks, called The Grand, mostly covered at high water, and a great resort of the Common Seal. There are two or three lochs in the island, and to the one at the south end the sea would appear occasionally to have access. A small island in the latter loch contained a Red-breasted Merganser's nest, apparently just robbed. The other lochs are more marshy in their character, and have a considerable amount of reeds, amongst which a single pair of Black-headed Gulls appeared to have a nest. Besides these birds, we saw several Coots, Wild Duck, Little Grebes, and Waterhens, these last two birds not being very common anywhere among the islands, at least in the breeding season.

The church of St. Magnus, now disused, but still well preserved, is a most striking object, its thin round tower having a very curious appearance, like a small mill-chimney. In this tower several pairs of Rock Doves were breeding. There are a good many small farms on the island.

Egilsay is in the shape of a wedge, and is highest at the blunt or north end, gradually tapering down to sea-level at the south or thin end. The central ridge is covered with the usual stunted heather where not cultivated, and there are many marshy depressions, where quantities of Dunlins and some Snipe breed, the island affording, in the winter, excellent snipe-shooting.

Lying midway between Egilsay, Shapinsay, and Eday are the Green Holms, two islands, as their name implies, covered with grass, and both uninhabited. We visited these on two occasions in search of Stormy Petrel's eggs. The larger island is on the north-east side, high enough for some Cormorants and Shags to breed upon, but it held no other rock-birds, except pigeons, that we observed. The grass grows on a sort of dry peat, and it was in the cracks in this peat that the Petrels bred on the smaller island; on the larger holm they kept more to the stony cairns on the shore.



## THE MAINLAND, SHAPINSAY, AND COPINSAY.

### THE MAINLAND.

POMONA, or the Mainland, as it is always called by the Orcadians, is the largest island of the group, and it is on this account that it derives the latter name. It is about twenty-six miles long in its greatest length, and fourteen broad in its greatest width. In two places it is nearly severed by the sea, viz., between Scapa and Kirkwall, where the breadth is only a mile and a quarter, and again at the south-eastern extremity of Deer Sound, where the parish of St. Andrews is almost divided by a very narrow isthmus, over which runs the main road.

The greater part of the coast-line is rocky, and is much cut up by bays and firths on its north-eastern side, the chief of these being the Bay of Firth, Inganess Bay, and Deer Sound, the two principal indentations on the south side being the Bay of Ireland and Scapa Bay. As is usually the case, the most precipitous parts are those facing the two oceans; on the west side the highest cliffs lie between Costa Head in the north and Breckness Head in the south, close to which latter place is the celebrated Black Craig. On the east, the rocks, from the Point of Ayre, terminate in the bold rocky headland of Mull Head, in Low's time tenanted by a pair of Sea Eagles, and which, that author remarks, had been thus occupied from time immemorial. It is almost needless to add there are no eagles there now.

The absence of clean sandy shores is noticeable, but there are a few patches cropping up here and there, as at Skail in the west, at Waulkmill Bay and Scapa Bay in the south, and Birstane Bay in the north-east.

The remaining coast-line consists of rocks and cliffs of no great altitude, the beach composed chiefly of stones and boulders covered with sea-weed, a coarse shingle showing itself here and there above the high-water mark.

Unpromising as it sounds to a wild fowler, yet, except upon the western part, a goodly number of ducks inhabit the coast, the numerous small burns which run down through the cultivated ground bringing with them, besides the attraction of fresh water, a considerable amount of food. There are, however, certain places along the coast which offer still greater attractions to these birds, and the different waders, in the shape of ooze-flats, partly covered with *zostera*, the grass so greedily sought after by both geese and ducks. Principal among these is Deer Sound, which, itself a bay, has within it other bays well sheltered from almost every wind that blows, and thus in every way perfectly adapted to the requirements of wild-fowl. Another spot is the Bay of Ireland, which presents pretty much the same characteristics as Deer Sound, with the addition that it is near the large fresh-water loch of Harray, and the cultivated lands adjacent, which provide excellent feeding-ground.

Lying in the west central part, and running from north to south, is a chain of lochs of which Stenness and Harray together form by far the largest area. Others of considerable size are those of Swannay and Boardhouse. The highest of all is Swannay, which lies 137 feet above sea-level, and from it there is a regular gradation until Stenness, the last of the chain, is reached, and to this the sea has access at high spring-tides. Lochs Boardhouse and Swannay run into the sea on the north-west, but a number of smaller lochs are connected with those of Harray and Stenness, the united waters of which run into the sea at the Bay of Ireland in the south.

The lochs of Stenness and Harray, which are only separated from each other by a very narrow isthmus formed of rough masonry, through arches in which the water runs, lie in a kind of shallow valley surrounded by hills, highest on the westward side, and the slopes of which elevations are mostly cultivated. Perhaps one of the finest and most characteristic views in Orkney is from the

Maeshowe. Away to the north-west lies the long reach of the Harray loch, looking yet longer than it really is when seen through the haze, which, even on a fine summer day, is so often present in Orkney. To the south-west the high hills of Hoy appear; thus, at one glance, the eye can take in the highest land and the greatest extent of fresh water to be found in the whole of the islands.

With the exception of two, all the lochs of any importance are included in the area now under consideration. Most of these are great resorts of wild-fowl, which in summer breed along their margins; and in winter, when their numbers are largely augmented by northern migrants, they collect in great flocks, which are composed principally of Wild Duck and Widgeon. Along the edges of one or two of these lochs are large flats covered with grass, which run out into the water. These places attract numbers of swans and grey geese, the greater number of these latter birds being the White-fronted species. Most of these lochs, too, contain trout, though others, even of some extent, such as the Loch of Skaill, contain only eels and sticklebacks.

The other two lochs just referred to are Kirbister, in the parish of Orphir, and the loch of Tankerness, the former containing trout, the latter none.

Though now only a marsh, the loch of Aikerness, in the parish of Evie, deserves a notice here, as it is often mentioned by earlier writers as a breeding-place and haunt of several water-fowl; even yet Waterhens breed there. From Low's account it seems to have been a shallow, grassy loch, and as early as 1804 was partially drained.

Eastward of the lochs of Stenness and Harray, just described, runs a range of hills, rising towards the south-east, until, at Lyra-dale, it divides off into two branches, one running south-west, and the other almost due east. In the south-west range lies the highest hill on the island, viz., the Ward Hill,<sup>1</sup> 880 feet. The

<sup>1</sup> Ward Hill. Refer to the hill of the same name and meaning in Caithness, the firs on which are visible across the Pentland Firth, as "Ward and Watch" Hills=Signal Hills. There is a "Ward Hill" in every island that possesses hills of any height.



eastern branch terminates just above Kirkwall, at Wideford, which is 720 feet in height.

The tops of all these hills are covered with heather, forming almost the last stronghold of the grouse and hares in the island. In the hollows, wherever there is sufficient moisture, the cotton grass grows to a great extent, and the heads are finer than we have seen elsewhere. We were particularly struck with this when looking one day from the top of Wideford Hill down on to the hollow between it and the hills lying to the south-west. The whole of this hollow was white, looking much more as if it was covered with snow than anything else.

A very fine panorama of almost the whole group of the Orkneys may be obtained from Wideford Hill on a clear day, and there is no better view of Kirkwall to be got from any other point.

After crossing the isthmus between Kirkwall and Scapa, the ground rises somewhat quickly to the east of the town, but there is no high ground anywhere on the east side of the isthmus.

The isthmus itself is low-lying, and, before they were drained, the Crantit meadows afforded good snipe-shooting, and Waterhens bred in the wetter localities. Through the greater part of this peninsula, which includes the parishes of Holm and St. Andrews, there is little of interest to the lover of scenery or the ornithologist, unless it be Mull Head and Deer Sound, before mentioned. Nowhere does the land rise above 300 feet in height, and it only attains to that altitude in one place. There is some heather in the central parts, and we should say the best grouse ground is that belonging to Tankerness. Hares are also plentiful in that district. At St. Mary's there are two lochs belonging to the Græmeshall estate, which are said to afford good fishing, and ducks are abundant there in the winter, but when passing them in the month of June we saw only a few Mallards and a Coot. There is a fine gloup about a mile or a little more to the south of Mull Head.

The cultivated area occupies a very large part of the whole island. We have no statistics at hand to give the exact proportions, but, roughly speaking, we should say at least a half, and reclamation of the waste land is still going on.

In our chapter on the physical features of the islands we have given an account of the principal plantations, but we may add that no house of any age is without some amount of trees round it, both, no doubt, for appearance and shelter.

### SHAPINSAY.

This island, perhaps more than any other, shows to what extent cultivation has increased in the Orkneys. In the *Farmer* for April 1866 it is stated that Shapinsay contains about 7000 acres, of which, fifteen years previously, only 730 were under cultivation, but that now (*i.e.* 1866) 5000 have been brought under the plough. Since then, we believe, even more land has been taken in, until there is little or no waste land left. The coast is, as usual, very rocky; and Elswick Bay, shut in as it is by Helliær Holm, is a safe anchorage for vessels. There is one loch on the island, which we are informed is good for ducks in winter.

One or two islands and skerries, lying between Shapinsay and Rendall on the mainland, are great resorts of seals, and we have counted thirty or forty here at one time, all *P. vitulina*. A few Terns, Eider Ducks, and Rock Pipits breed on these islets, but in no great quantities.

### COPINSAY.

Lying off the east centre of the mainland, Copinsay is celebrated, even in Orkney, for the abundance of its sea-fowl. The cliffs on its eastern side rise to a height of close on 300 feet, and, amongst other birds, contains probably one of, if not *the*, finest colonies of Kittiwakes in the United Kingdom. When disturbed, these birds look, at some little distance off, like spin-drift covering the face of the rocks. On the west side the ground slopes rapidly down to the sea, and contains some good arable land, as also does Cornholm, which, with two other small holms, are connected with Copinsay at low water.

The Horse of Copinsay is a black rock lying to the north of

Copinsay, and is also tenanted by sea-birds, and feeds two or three sheep.

Salmon visited Copinsay on May 31st, 1831, and gives an account of the birds breeding there and the eggs he took. The species he met with were a pair of Peregrine Falcons, Guillemots, Razorbills, Kittiwakes, Cormorants, Shags, and Herring Gulls.

These Peregrines are mentioned by Low as having bred there from time immemorial. He also gives an account of the manner of taking sea-birds' eggs there, and says that of old the inhabitants paid a rent for the privilege of taking them, but that it had then been given them for nothing, quaintly adding that he thought the danger of taking them was a sufficient tax.





## THE SOUTH ISLES.

### HOY AND WALLS.

THE island of Hoy, whose greatest length is fourteen miles, with a width varying from four to five miles, contains the three divisions of Hoy, and North and South Walls, the latter being almost an island in itself. South Walls is almost wholly cultivated, there being only a very small piece of rough ground in the centre and south covered with the remains of stunted heather and coarse grass.

With the exception of Melsetter and the land immediately adjoining the sea as far as Mill Bay, and again at Hoy in the extreme north-east of the island, and the small hamlet of Rackwick on the west, the whole of Hoy and North Walls is uninhabited, the country itself not being adapted for cultivation. It is however capable of grazing a good number of sheep for the greater part of the year, and there is also abundant summer pasturage for cattle. The whole of this district is mountainous, being divided by valleys through which run several small burns, and in which the lochs lie. These lochs are, unfortunately, connected with the sea only on the west side, the out-running burns having a fall varying from fifty up to several hundred feet almost sheer down to the sea, thus effectually barring out the sea-trout from gaining access to them. For some reason burn-trout do not seem to have thriven here, though introduced, together with Loch Leven trout, into Heldale water, and Mr. Moodie-Heddle fancied they had been carried down the burns during the spawning season and thus destroyed.

All this large extent of country is covered with heather of different degrees of utility, and divided by numerous burns, and it is this wild mountainous character, as well as its unrivalled cliff-

scenery, that gives to Hoy its great interest to the ornithologist. The sea-eagles, once so numerous, are gone, never, we fear, to return again, though, should they be inclined to do so, we are safe in assuring them that the proprietor will do all in his power to protect them; but the Peregrine still holds his own, nesting in the most inaccessible precipices: the Manx Shearwater burrows in the green and soft places in the cliffs; while numbers of Richardson's Skua lord it over the rest of the gull tribe.

All the coast-line on the north-west of the island from Breibuster Sound to Rackwick is precipitous, varying in height from 300 to over 1100 feet, and, exclusive of the Berry, contains the finest rock-scenery in the islands. The highest cliff in the whole range is at St. John's Head, the land rising on each side to this culminating point. These cliffs are by no means sheer precipices, but in many places have long grassy slopes on which sheep graze in comparative safety, and it is mostly below these slopes that the sea-birds build. Geös and rocky inlets also break up the coast-line in parts, and there is a very fine one not far from Breibuster, inhabited by a considerable number of Shags and a good colony of Kittiwakes, etc.; pigeons also inhabit the caves. That remarkable stack, the Old Man of Hoy, lies between St. John's and Rora Heads, and from most accounts the old gentleman has not many years to live, as he is being gradually eaten away at the base by the heavy waves of the Atlantic.<sup>1</sup> At Rackwick the land slopes down very suddenly to the valley, the hamlet being much scattered from pretty high up the slope down to its base. It is here that the best rock-climbers on the island lived, and still do so, and it is through their exertions probably that eagles have become only a name in Orkney.

All this coast-line just described slopes down on the landward side more or less abruptly to a valley through which runs the part-road, part-track to Rackwick from Hoy Lodge. At this latter place the proprietor is now taking in a considerable extent of ground,

<sup>1</sup> Mr. Moodie-Hedde, however, informs us that the base is conglomerate, and that it stands upon a *piece of fire rock*, so he does not think it runs much risk of perishing, though a fragment of the softer sandstone forming the stack may sometimes fall off.



J.C. Millaers.

HOY CLIFFS  
ORKNEYS.





with a large steading, and otherwise improving his property. From the northward this valley is joined by the narrow glens of Segal and Berriedale,<sup>1</sup> which contain some of the few indigenous trees in the island, as before mentioned;<sup>2</sup> close to the track is one of the strongest springs of water we have seen anywhere.

Separated by the strath through which the Rackwick road runs on the one side, and another deep glen on the other, stands the Ward Hill, 1564 feet in height, and the highest hill in the whole group of the Orkneys. Round its base the heather grows, but its sides are much cut up with fissures, down which quantities of stones and rocks are brought by the winter rains, forming large "screes" or slopes of loose stones, and these, with its steep slant, give the hill an appearance of even still greater height. In the glen to the south of the Ward Hill, and facing north, are some ledges of rock on which Golden Eagles, probably the only pair in the islands, used to breed.

From Rackwick the land rises southwards very abruptly from 50 to 1000 feet in a very short distance, and the whole of the coast-line all along is very steep, culminating at last in the magnificent, sheer, red-coloured precipice of Berry Head, 600 feet; after that the land sinks down rather abruptly to Melsetter. Throughout this length of coast are several "stacks" or upright pieces of rock detached from the main cliff, their tops, as a rule, being covered with grass, though none of them is so conspicuous as the "Old Man of Hoy," before mentioned.

The coast-line on the east of the island never assumes such grand proportions as that last mentioned, the whole land falling towards that point of the compass; the shore is more indented with bays, having sandy or muddy flats in their upper reaches.

Elsewhere along the eastern side the coast is mainly composed of low cliffs, or steep banks clad with grass, fern, and heather, having rarely any beach beyond boulders and weed-covered rock. Only at two places towards the northern end of the line do the cliffs rise to some 200 to 300 feet in the precipices known as the White Breast and the Bring.

<sup>1</sup> Berrie = Berry = Bergdale = the Rocky Glen.

<sup>2</sup> *Vide* p. 6.

All the best heather, and consequently the best grouse ground, lies on the lower slopes of the hills, especially on the east side; that which is exposed to the west being poor and stunted; the tops and sides of the hills are covered with flow ground and benty grass, the latter of little use, except in the early summer for sheep and cattle. There are three lochs of considerable size, all in that part of the island called Walls, and the largest, called Heldale Water, contains char, the only loch that does so in Orkney.

Besides these lochs there are a number of much smaller ones, called locally "Loom-a-shons," or "Loom-a-gens," on which the Red-throated Divers breed, and these birds the proprietor does his best to protect, though we fear they do not always escape the destroyer. Colonies of gulls, both the Common, Herring, and Lesser Black-back, breed on the flows on the tops of the hills or along the edges of the lochs, mixed, in the former situation, with Richardson's Skuas, but never in the latter.

Most of the burns, except those which run to the west, contain trout and sea-trout, but the latter only come up in a spate and retire to the salt water as the flood fines down; indeed, the most of the angling consists in spinning some form of minnow in the salt water. The largest of these burns is the Rackwick, which in its lower reaches is sluggish and canal-like; it runs into a loch close to the sea, and to which the latter has access at high water.

Immediately above Melsetter is a large patch of whins, in which are great quantities of rabbits; and a little below, on the south shore, some links, and a white patch of sand which is very conspicuous when crossing from Scrabster to Scapa with an incoming tide.

As before mentioned, South Walls is almost an island, being connected with North Walls by a very narrow neck of land, over which the road to the Post Office, etc., runs. On the south side of this isthmus is Aith Hope, and on the north Longhope.

At one time this neck of land was much broader, and links existed, but these have been washed away by the encroachments of the sea, so much so that now even the *ordinary* tides cover the Ayre at high water for thirty to forty minutes, the *stream* tides



for an hour or more, according to the height to which the gravel may have been thrown by the last gales. The water flows usually from the north or Longhope side, but before or after bad weather it comes occasionally from the Aith Hope side. *Hope* in all Scandinavian tongues (*Haup*) means a bay which is the *Hap*, *Haven*, or *recipient of a stream*.

The lower part of Longhope is excellent anchorage for sailing vessels which cannot weather through the Pentland Firth for want of a favourable wind. The upper part at one time contained oysters, which were cultivated to a certain extent by the proprietor of Melsetter, but owing to the mud and peat washed down by the burns, and sheep drains made when the present owner of Hoy increased the area under cultivation, and otherwise improved the property, they died out, and at the present time there are few, if any, left. Low says that in his time they were, though few, so very large that they had to be cut into four pieces before they could be eaten! Even cockles were nearly exterminated, and several kinds of sea-weed affected, by this peaty deposit.

South Walls contains little of interest to the ornithologist. The rocks on the south side contain a few rock-birds and pigeons, and there is one fine colony of Kittiwakes. At the south-east end there is a very curious old church, in which, in former years, the Moodies of Melsetter were laid out on a table to dry when dead, showing the dry and antiseptic nature of the air.

#### GRÆMSAY, CAVA, RISA LITTLE, FARA, ETC.

Lying along the north-east coast of Hoy, and between it and S. Ronaldsay, are the islands of Græmsay, Cava, Risa Little, Fara, Flotta and its Calf, and Switha, which however are only deserving of a short notice here.

Graemsay, situated at the mouth of Hoy Sound, has two light-houses, and is wholly cultivated, there being little or no grazing—all arable. Risa Little and Cava are small green uninhabited islands, used for grazing purposes, as is also Fara, but this latter is

inhabited. All these islands are frequented by Grouse, and of late years a large colony of the Common Gull has taken possession of Risa Little; a good many seals also frequent the shores of this island.

### FLOTTA AND SWITHA.

Flotta is much the largest of the islands now under consideration, and supports a considerable population. Still it is by no means over-cultivated, and a fair number of grouse are yearly killed there, especially late in the season, when a good many birds come across from Walls. We saw a few Curlews, Golden Plover, and some of the commoner gulls; but the shores, though rocky, are not possessed of cliffs high enough to afford nesting-places for any of the rock-birds. On the east side of the island is the bay of Panhope, one of the best harbours in the South Isles, and, according to Low, so called from there having been a salt-pan there, which, however, had been given up even in his day.

Low also mentions that there was a great fishery for Coalfish here, to which most of the boats in the South Isles repaired. This fishery was followed, and occasionally interrupted, by dog-fish, which, however, the islanders did not consider an unmixed evil, as, although these creatures drove every other fish away when they put in an appearance, their own livers yielded oil in such abundance as to more than compensate for the loss of the fish driven away by them. A like case is mentioned by Mr. Irvine-Fortescue as occurring within the last few years at Scapa.

The Calf of Flotta is green, with some patches of brackens, and has apparently a considerable depth of peat; of birds we saw a few Snipe, four or five Wild Ducks, with some Shags, Herons, and Eiders; some Rock Pipits and Twites among the smaller species.

Switha is a fine green grassy island, with high rocks on the south and south-east side, sloping gently down to the sea on the north. We saw a good number of the common waders, such as Oyster-catchers, Ring Dotterel, etc., and, judging from the smell,



J. G. Millais. del.  
1887.

Reisa Little.  
O. K. Kays





Stormy Petrels must breed in the holes and cracks in the hard peaty soil. In the rocks to the south-east we saw numbers of Black Guillemots, some Rock Doves, and numbers of Herring Gulls.

In Low's time Switha was a breeding-place of the White-tailed Eagle.

### LAMBHOLM, BURRAY, HUNDA, AND GLIMPSHOLM.

Lying close to the north end of S. Ronaldsay are the islands of Lambholm, Burray, Hunda, and Glimpsholm. Lambholm is entirely cultivated, and possessed of no particular ornithological interest. Burray, though much cultivated, still possesses Grouse, and Mr. Cowan informs us that as many as twenty brace<sup>1</sup> may be got there any day in August; it also used to be noted for the abundance of its rabbits, but this did not compensate for the mischief they did by burrowing into the sand, and so enabling the wind to get hold of it and blow it about. Hunda is a small island about a mile long, and connected to Burray at low water by a narrow strip of beach; it is a most desolate-looking island, scarcely a bird to be seen on it, and contains but one croft. The uncultivated part is, as usual, covered with stunted heather, mixed with an immense amount of the crowberry plant; the top of the surface is being rapidly peeled off for fuel. The west side consists of low rocks, which contain no birds, and on the east side we only met with a very few of the commonest species, one Black Guillemot, a Red-breasted Merganser, a Snipe, and a few Redshanks, etc., being all we saw; there is a little grass at the south-east end.

Glimpsholm is a fine grassy island, with a little stunted heather at the north side, and on the south-east side a patch of brackens. Here was the largest colony of Arctic Terns we had as yet seen, their nests being placed at random in the short grass, some even yet empty (July 5), others containing one and two eggs. Besides terns there were quantities of the common shore waders. There was a large flock of Curlews on the island, either migrants

Probably not so abundant now, judging from later information.

or non-breeding birds : one appeared to be a very small one. Other birds were a few Sheldrakes, a pair or two of Hooded Crows, but no Eiders.

### S. RONALDSAY.

Even in Low's time, S. Ronaldsay was described by that gentleman as the granary of the South Isles, and cultivation has certainly not gone back since then ; indeed, when visiting the island in June 1889, we saw fresh ground being broken up. No wonder then that bird life is getting so much scarcer in the Orkneys ; many of the indigenous birds are driven away before the plough, and from the lack of cover, this loss is not compensated for, *at present*, by any increase of such birds as can live under the new state of things.

Of the two sides of the island the east is by far the more interesting. Around St. Margaret's Hope, which is an excellent harbour, and where the principal town of the island stands, there are a few gardens, and on the south-west of the harbour some whins, which attract a few Blackbirds, Robins, and Linnets. Most of the ground out to Hoxa Head is cultivated, with a few patches of moorland here and there, and the south-east side consists of grassy slopes. The Head itself is rocky, and a few Herring Gulls, Cormorants, and a pair or two of Hooded Crows, appeared to be breeding there. Widewall Bay, at the head of which is a small extent of sandy links, is a fine landlocked harbour, but too shallow to be of much use for shipping ; its coast-line is mostly sandy. Almost immediately opposite Widewall Bay, but on the other side of the island, the sand links again appear, and are, though small, rather more extensive.

The cliffs on the east coast are fine, though, except in one or two places, not so precipitous as in many of the other islands, being much intersected by green ledges, and containing many long grassy slopes. There is a depression of some extent at Windwick,<sup>1</sup> where there is a bay, but north and south of that the land rises to between 200 and 300 feet. From the nature of the rocks, Guillemots,

<sup>1</sup> The termination "wick" signifies, in Orkney and Shetland, a bay.



Razorbills, etc., are not so abundant, but they seem exactly suited to the Herring Gulls, which, at this locality, have some of the most extensive colonies we know of in the Orkneys; mixed with these are a very few pairs of Lesser Black-backed Gulls and still fewer of their larger cousins. We were pleased, however, to find the (very large) colony of Jackdaws, mentioned by Low in his tour, which birds are decidedly uncommon in the islands; and even our worthy landlord at St. Margaret's Hope, who himself had a decided turn for ornithology, did not know these birds existed in the island. A male Peregrine was flying about amidst the crowd of Herring Gulls disturbed by our approach, chattering most energetically, but the female was invisible, nor could we see anything of the nest. North of the sandy beach before mentioned at Newark Bay the coast again rises, but to no great height, Grimness, a rocky headland, being the extreme eastern promontory.

The highest point of the island is, as usual, the Ward Hill, nearly 400 feet high, not far from Stowse Head, which is as yet uncultivated, and covered with the usual very stunted heather and coarse grass. For all its size, there is no really good heather, and consequently no grouse in the island, and only a few hares and rabbits. There are many marshes and lochs in the island, especially in the south. These latter, with one exception, contain no trout, but they afford some of the best snipe-shooting in Orkney, for which indeed S. Ronaldsay has always been famous. Besides Snipe there is abundance of Dunlins, Redshanks, etc., but few ducks. During our walk round the island we saw but very little in the way of small birds, either in number or species, even Common Buntings and Wheatears were rare—indeed, of the former we only saw one individual. We saw none of the Black-headed Gulls at the loch near the church as mentioned by Low, but many Coots and a few Waterhens. This loch is very reedy at the southern end, and the margins very boggy.

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Swona, which lies to the south-west of S. Ronaldsay, is a small rocky islet a little over a mile long by about a third broad.

The centre is grassy, and the rocks, especially at the north end, extremely sharp and jagged. This much we could see from Burwick, in S. Ronaldsay, but as the island lies some distance away from the latter place, and we could not hear that it possessed anything particularly interesting from an ornithological point of view, we did not think it worth while personally to visit it.

## STACK AND SKERRY.

THESE islands, a sort of "No Man's Land," though said to belong to the Heddles of Melsetter, lie almost forty miles west of Hoy, and are thus described by Harvie-Brown:—

"June 18th, 1887.—Arrived off Stack or Suliskerry early to-day with a light north-west wind, and made an easy landing on the south-east side of the Skerry, just below the remains of a small house.

"Great Grey Seals in some numbers were bobbing around us in the surf. We were about two hours on the island, and then the fog came down from the northward, and we hurried again on board, as the wind freshened. Mr. Norrie took two general views from the highest point of the island, facing east and then west, and four others of geös and birds.

"The island is divided near the east end by a deep geö, impassable at low water. We landed two hours before low water, and left just at low water.

"The most of the island is covered with *Cochlearia officinalis*, fennel, chickweed, and a dark green, luxuriant grass, the latter here and there in patches, fennel and chickweed most abundantly. I saw no appearance of sea-pink.

"The rock which forms the island is composed of the newer gneiss, changing into syenite, and Professor Heddle took specimens.

"The height of the skerry is about 50 feet at the highest point, and it slopes away to the east about half a mile; to the west it dips quickly where two geös from north and south nearly meet, and in the hollow is a fine colony of terns. In some places the forests



of fennel, which, when bruised, gives forth a strong aromatic scent, predominated over the cochlearia, and in others the order was reversed. The fennel seemed to choose the deeper soil of the Puffins' ground, the cochlearia preferring the stonier and thinner soil. The dark green grass before mentioned occurred in patches in the deeper soil in the hollows, and seems to have been principally encouraged by the droppings of gulls and Eider Ducks, nests of which were often placed in the thicker tufts. Here and there were pools of spray or rain-water, with rich mould and grasses round their margins, and muddy slopes, in which the footprints of ducks and gulls were abundantly visible.

"Several of the pools are visited by the Great Grey Seals, which travel even as far as the middle of the island, and here an annual slaughter is made by boats from Sutherland, when the seals congregate in October for breeding purposes.

"The birds observed on the Skerry were, Turnstones in flocks of from five to twelve; Oyster-catchers, common; Rock Pipits fairly abundant; Shags very numerous, breeding all over the rocky fringe, in the open crevices of the ruins of the old house, and in almost every available spot, most of the young being hatched out. I saw no Cormorants.

"Great Black-backed Gulls, a good many pairs amongst large numbers of the Lesser Black-backed Gulls. Herring Gulls common, apparently congregating mostly towards the east end, and on the east side of the rent or tide geö. Black Guillemots not very common, a few pairs among the barer rocks. Puffins very common all over the vegetation-covered portions, and tunnelling all over it. Eider Ducks common; I came upon several nests. The Arctic Tern was the only species of tern identified, and I shot one and preserved a foot, tail, and wing, to satisfy myself and others."

On another occasion, as related below, Harvie-Brown made a second unsuccessful attempt to land upon the Stack, and we again quote from his Journal as follows:—

"We sailed on the night of June 28th, 1889, for Stack, from Scrabster. A heavy sea running seriously interrupted the way of the vessel, and we did not reach off till 9 A.M. next day.



STACK: LOOKING WEST.





"*June 29th.*—Impossible to effect a landing, and useless to attempt it. Mr. Norrie, however, made seven or eight first-rate 'shots' with his camera.

"The height of the Stack is 130 feet. A smooth square precipice of a greenish-grey rock, seamed near the top with a broad horizontal dark red vein of felspar, faces the south, and the same, continuing round a very sharply defined angle to the west, also faces the Atlantic.

"This latter surmounts a dangerously slippery, steeply sloping under-cliff or pedestal. The entire summit, sloping and rounded towards the east side to within 50 or 60 feet of the water, is densely populated by Gannets; and on the north-west side they are equally numerous upon certain broad shelves, where the rock has broken away apparently, in large horizontal masses—great steps of a giant stair! The isolated portions at the ends also are covered with the birds to even lower elevations above the sea, but on the west side, where it is more precipitous and a smoother rock, there is very little bird life. The colour of the whole is very fine; the top, snowy-white with birds and whitewash; lined across here and there with small black streaks, where the perpendicular facets of the stair, or step-like ledges, occur; the lower portions all around dark with the action of the waves and spray and adhering tangles; the south and west faces of mural precipice—as already mentioned—of an almost glaucous green or grey, and almost lustrous surface, with the intersecting bands of dark red felspar just below the snowy summit; contrasts of colour by no means common among our islets of the sea. Moreover, the snowy masses of the adult Gannet companies are 'picked out' quite strikingly, and accentuated by the dark jackets of the younger birds, and by the crevices holding shelves of sober-coloured Guillemots and Razorbills. We had a particularly fine light upon the rock for the camera, and got good chances of views on all sides, notwithstanding the high and deep heave of the Atlantic swell.

"We noticed that a very much larger percentage of immature birds occupy the Stack than we have ever observed elsewhere at any British haunt of the Gannet."

As far back as A.D. 1400, these islands, and probably also North Ronay and North Barray—of the Hebridean group—were known to the Norsemen, and used by the Orkney Earls as a seal and egg-preserve; and even yet, when occasion offers, boats from Stromness, and Tongue in Sutherland, go and harry them for eggs, as was the case this year (1890), when something like one hundred dozen of eggs were taken and sold in Stromness.

Since the foregoing was written Professor Newton has visited Stack, and, in a letter to us, he also remarks on the large number of immature Gannets, a much larger percentage than is generally seen in other more visited localities, and this he ascribes to the same cause as ourselves, viz., from the eggs being less frequently taken, and the birds being less frequently disturbed.



## THE PENTLAND SKERRIES.

ALTHOUGH we have described these islands in a former work,<sup>1</sup> still they really belong to the Orkneys, being included in the parish of S. Ronaldsay. In any case, however, a book on the Orkney avifauna would be incomplete without a mention of these well-known "Skerries." Lying as they do in the course of one of the most famous migration lines in Scotland, many birds occur there almost commonly, which, as visitants to the islands themselves, are decidedly rare; and it may well be, that owing to the attraction of these lights, Orkney is indebted for many records of the rarer species, which, without this attraction, would pass on. Other lighthouses there are in Orkney, which have contributed their quota to the Migration Reports issued for several years back by the committee formed for collecting these facts; but the Pentland Skerries are *facile princeps*, being, we believe, scarcely second in importance to the Isle of May in the Firth of Forth.

We hope from this, however, our readers will quite understand that it is not from the mere fact of there being lights on the Skerries that birds are drawn out of their line of flight by them, or that such lights placed vaguely *anywhere* would give such good results; it is because these lights are in the course of the main fly-line over Orkney, which line is concentrated by the cliffs on each side of the Pentland Firth, that we have such wonderful results.

To go into the whole general subject of migration is not necessary here; there is quite enough to be said about the area under consideration.

<sup>1</sup> *A Vertebrate Fauna of Sutherland, Caithness, and West Cromarty*, 8vo, 1887.



It will be seen from our list that already some birds which were at one time quite scarce in the islands are now getting commoner. A species may fly over a certain area for years on migration, and, there being nothing to attract it either for food or breeding purposes, it will naturally pass on without a halt, unless driven to do so by stress of weather. Should, however, any part of our area be so altered by art or nature as to become suitable for that species, during one of its involuntary visits the bird might be more inclined to linger, and eventually, though not all at once, become a breeding species.

From the foregoing we think we may safely say in regard to the distribution of birds during migration, as opposed to their distribution at other times, that the former on their fixed and well-known fly-lines indicate future breeding areas, if the places become so altered at any time as to suit the species. We trust this will explain to a certain extent the changes that are now going on in the Orcadian avi-fauna, as regards the increase of some birds.

Though the fact is now well known to most ornithologists, that nearly all the birds in our islands are to a certain extent migratory, this may possibly be news to many of our Orcadian friends. In some instances this may be more easily seen in those islands than in many other parts of Scotland. Take, for example, the Chaffinch, a bird that is seen in most parts of Scotland the whole year round, and where, for that reason, its migratory habits might be easily overlooked; yet in the Orkneys, though breeding in a few rare instances, in winter it is, in many places, almost a common bird.

The autumn migration seems always vaster and denser to the ordinary observer than the spring migration, and there are several reasons which will readily account for this:—

*First*, For every pair of birds which pass north in spring, which are not barren, or which do not have their eggs or young destroyed, we may say from four to ten more come south in autumn.

*Second*, In autumn and winter the areas where food-supplies are obtainable by species are more restricted, and so the birds, especially those that are most noticeable during migration, their

numbers now vastly increased by the addition of their young, are collected into a smaller area.

*Third*, Fogs are more prevalent at that time of year, and these seem to bewilder the birds, which are thus brought down from their great migratory fly-lines, which are often very high in the air, to a much lower level.

In spring, on the other hand, birds do not appear to come in such rushes; they then almost invariably migrate by night, and, as the weather is generally finer, do not fly so low.

Were the Skerries rather larger, with a more broken surface, and especially if they possessed a small plantation, however stunted, no doubt the returns of warblers would be much greater; as it is, there is no inducement for these latter birds to remain, once the daylight returns.

It can easily be understood why the Migration Returns from these places vary so much year by year, the wind and weather having much to do with it. Birds like a wind a point or two forward of the beam to cross with, *i.e.* on the shoulder, and they dislike a following wind, as that disarranges their feathers and their tails (or steering gear), and blows them helplessly about. But, at the same time, this stern-wind is the one most favourable to ornithological observation on our coasts. When birds travel with a gentle wind on the shoulder (*i.e.* near the wind, like a ship), they are often least seen; but should the wind shift after they have started, dead ahead, or, equally bad, dead astern, the first landing-place and shelter is crammed with them, and then it is that so many rarities turn up.

When the night is clear, and the wind and weather favourable, birds travel at a great height, and are thus less attracted by lights, and pass on; but a hazy night, with a strong wind from the east and south-east, causes them to lose their way; they thus lower their flight, and are attracted by the strong rays of the light-houses, and such nights give us the best-filled schedules.

However, we need not pursue this subject further. All those who wish to study migration should read the reports published by the committee before mentioned. Of these there are nine, begin-

ning in 1879, and ending in 1887, and all the species are there entered, with date and place, as far as they could be identified.

We will now proceed to mention those birds that occur on migration at the Pentland Skerries, and at any other lighthouse on the islands from which we have any returns of interest. Where no lighthouse is actually mentioned, the Pentland Skerries must be understood.

The best and simplest plan will be to take each family in order, and make our notes as concise as possible, omitting, however, the water-birds as being presently of less interest.

*Turdidæ*.—The rarest of these birds are the Missel-Thrush and Ring-Ouzel. Missel-Thrushes were seen at North Ronaldsay at the end of September 1882, and these birds have also been recorded from there in January. On the Pentland Skerries one was seen for the first time on April 1st, 1888, and another on March 25th, 1889, marked "very rare," by Mr. Gilmour, the assistant light-keeper, who says he has only seen these birds once or twice before.

Ring-Ouzels are seen mostly on spring migrations; one was seen as late as May 17th. In April 1886 there was a rush, but this is rare; they are generally in smaller lots. They are not so common in the autumn.

The other migrants are Fieldfares, Redwings, Thrushes, and Blackbirds; the latter rarely strike the light, and are perhaps the rarest. The greatest "rush" of these species takes place about the middle of October, and up to the first week of November, varying, no doubt, according to the wind and other causes. Fieldfares return in greatest numbers in the end of April and the first week or ten days of May, but Redwings and Thrushes are remarkable for their scarcity in the spring records. An odd Thrush is also occasionally seen in July. Blackbirds and Thrushes occur pretty frequently in September, which, too, seems to be the most usual month for the Ring-Ouzels.

*Saxicolinæ*.—Wheatears arrive in greatest numbers about the first week of April, and occasionally in rushes, as at the Pentland



Skerries on April 6th, 1884, and again at N. Ronaldsay on April 4th, 1885. They seem to be rarer on the return journey; we have only a few notes of them in the schedules for autumn.

Whinchats (one reported in *March* 1887, and again in *March* 1889) occur every spring, but are rare; also Stonechats, though they are not common either, and are probably as much seen in the other islands as on migration; they are, however, very local.

Redstarts are generally rare. They come about the middle of May (May 17th, 1888, abundant); earliest, April 29; at times much more numerous in autumn, as in September 10th and 12th, 1889; seen as early as August 14th. The Black Redstart has occurred twice, once on March 31st, 1884, and again on April 24th, 1889.

*Sylvinae*.—Robins occur on both migrations; they are as a rule more numerous in spring, when at times they are very abundant, as on April 19th, 1886, and April 14th, 1889. They occasionally remain during the winter.

The Whitethroat (?) has only occurred once or twice in spring.

The Blackcap seems only to have been recorded once, in October 1888.

*Phylloscopinae*.—Golderests do not figure very largely in the schedules, but occur on both migrations; they are principally seen in the autumn, once as early as September 3d.

Willow Wren.—It seems strange there is no return of this very common warbler, but our excellent correspondents may have included them either under "Titmice" or "Whitethroats."

It is remarkable that there should be no record of the migration of the Sedge Warbler, as this is one of the commonest warblers in the islands.

*Accentoridæ*.—The Hedge-sparrow is recorded once or twice in April; in one instance with the note "not very common." They seem to be still rarer in the autumn.

*Paridæ*.—Though "Titmice" are recorded in several instances it seems probable that other species are meant, most likely some of the smaller warblers, judging from the description given and the usual dates of arrival, May. All true Tits are excessively rare in Orkney.

*Troglodytidae*.—Common Wren, spring and late autumn; sometimes in considerable numbers in latter season; seen as late as December, and may remain at times through the winter.

*Motacillidae*.—The Pied Wagtail is common on both migrations, sometimes being seen in March, and the bulk departing in September; observed the second week in May. There seems to be no record of *yellow* wagtails.

The Grey-headed Yellow Wagtail has been twice observed, and once shot by Mr. Gilmour; the first occasion was on May 19th, 1888—when the bird was killed; the second time was on May 3d, 1889.

Pipits are recorded only in three years, 1881, 1882, and 1887, and then only in autumn. A rush of Rock Pipits was reported from N. Ronaldsay on September 4th, 1885, which remained throughout the winter (but these might be residents).

*Laniidae*.—A Red-backed Shrike was obtained on May 19th, 1888 (see under Species), and this appears to be the only record of shrikes we have.

*Muscicapidae*.—The Pied Flycatcher is very numerous at times, more so on the spring migration in the month of May, when, in 1885, from the 2d to the 24th, great numbers were seen; numbers were seen again in autumn of the same year. Their numbers are very fluctuating, or at least they are not observed in great quantities every year. In 1888 and 1889 there were no spring returns at all, and only two in autumn, one in September of each year.

Spotted Flycatchers are first recorded on May 16th, 1888, after which they seem to have become more numerous; this is the only notice we have; none for autumn. They are very rare in Orkney.

Sometimes the species are named in the schedules; at other times the word "Flycatcher" is used. Under this heading they appear almost every year in both spring and autumn. We have tried to separate the records, as far as possible, of the two species.

*Hirundinidae*.—Swallows, Martins, and Sand-Martins are generally comprehended under the term "Swallows." The second fortnight of May is their usual time of appearing in the greatest

numbers, but they occur also in June. They begin to return as early as the second week in August, the last being seen as late as October.

*Fringillidæ*.—Amongst this family are included Greenfinches, an occasional House-Sparrow, Chaffinches, Bramblings, and Linnets, the latter most likely including Common Linnets, Redpolls, and Twites. In spring finches move as early as February, and, in fact, Linnets are recorded more or less throughout the year. Greenfinches were observed on January 1st, 1888, and a Redpoll on March 10th of the same year. Bramblings appear in April, but are rare; Mr. Gilmour identified them by their *white rumps*. Some were seen again on October 18th, 1889; wind strong from the south, and weather hazy. Chaffinches occur as early as February, and through March and April, as late as May, at which date. Greenfinches were observed. Chaffinches are seen in great numbers at times at the end of October, and as late as the end of November. Sparrows are only occasional visitants. Five were seen on May 29th, 1888, but at Auskerry, in May 1883, a flock was seen, as also a Brambling, Chaffinch, and Greenfinch about the same date. A sparrow seen at the Pentland Skerries on May 12th, 1889, may have been a Tree-Sparrow, as it had much white about the head.

*Loxiinæ*.—Crossbills were seen on July 9th, 1888. There was a great migration of these birds throughout the north that year. No other entry of these birds occurs.

*Emberizinae*.—Common Bunting, Yellowhammer, Reed Bunting, and Snow Bunting. Common Buntings have been seen in January, but in April and May are most abundant; not common in autumn. Yellowhammers are occasional in March and April, rare or absent in autumn. Reed Buntings occur regularly in May and October. Snow Buntings are abundant at times in October and November, but sometimes as early as September 17th, and they have been seen as late as May 1st.

*Alaudidæ*.—There are a few records of Skylarks in spring, sometimes as early as February 9th, continuing up to April; return begins in September, and continues at times up to December. Occasionally come in rushes, as at N. Ronaldsay in October 1885.



*Sturnidæ*.—Starlings are resident on the Skerries; they fluctuate in numbers, which may be due to merely local movements. But in July 1883 there was a great continuous migration at Auskerry.

*Corvidæ*.—Jackdaws, Hooded Crows, Rooks, and Ravens. All these are resident in the islands, and breed, so no doubt many of the migration reports refer to local movements. Jackdaws occur continually in our schedule for February and March 1889, but as they breed in S. Ronaldsay this is not to be wondered at. In fact there is scarcely a month in which *Corvidæ*, generally either Rooks or Jackdaws, do not figure. Ravens are very rare, and Grey Crows by no means common, as the actual numbers seen are so often mentioned in the schedules. This would appear as if the Orkneys were outside the great stream of these latter birds, which, farther south, come to us in such masses.

*Cypselidæ*.—Swifts are more often seen in autumn than spring, but at Auskerry flocks were seen on May 1st, 1885, with this note on the schedule:—"rarely seen until the middle of June."

*Picidæ*.—Two records only occur, both in autumn, of the Great Spotted Woodpecker.

*Cuculidæ*.—There is not a single record occurs of Cuckoos.

*Strigidæ*.—The Short-eared Owl is reported to visit Auskerry annually in May. A grey owl is reported from the Pentland Skerries now and then in autumn; once on May 3d, 1889. A Long-eared Owl on November 17th, 1888.

*Falconidæ*.—Hawks occur in most of the schedules, but none in 1888 or 1889.

*Ardeidæ*.—Common Heron seen most months, but never in any quantity.

*Columbidæ*.—Rock-Doves are occasionally seen, but there are only two records of Wood-Pigeons, viz., June 18th and October 7th of 1886.

*Pteroclidæ*.—For Sand-Grouse, see under the species. The Pentland Skerries was one of the places where they were earliest seen, viz., May 17th, 1888.

*Rallidæ*.—The Corn-Crake appears regularly in May, and nests

on the Skerries; autumn records are rare. When they do occur the middle of September is about the last date. A young bird on one occasion, 1884, remained all winter.

*Charadriidae*.—Golden Plovers, Ringed Plovers, Lapwings, Turnstones, and Oyster-catchers, all figure in the schedules, but many of these may only locally migrate, especially as now Lapwings are inclined to stay in increasing numbers all winter.

Golden Plovers are recorded in February, April, July (rare at this date), August, September, and October. At Auskerry flocks were seen on May 15th, 1883, all day in large numbers. From N. Ronaldsay, Golden Plovers are often recorded in August, and many remain there all winter. August seems the busiest month all round for Golden Plovers.

Ringed Plovers: records of no great interest; they are constantly occurring, and breed there.

Lapwings: flocks in February and March, and again in September; rare in October; indeed, not common during any of the other months, but a pair or two nest on the island. Turnstones remain all winter, but Oyster-catchers are mostly seen in end of February and March, and again in September.

*Scolopacidæ*.—Woodcocks are regularly noted in the schedules, but we seem to have few spring records in February, March, and April. In autumn they occur regularly, at times in rushes, not only here, but at N. Ronaldsay, 1884 being a very good season for them. The "rush" comes about 15th to 20th of October. Common Snipe, very few and unimportant entries, with one exception, viz., in February 1885:—"the first was seen on the 16th, and on the 19th a large number all day on the island, where they bred for the first time in 1888." A Jack Snipe was seen on July 4, 1884, a very unusual date. Dunlins generally arrive at the end of April or beginning of May; they breed on the island. Purple Sandpipers are mentioned, but very rarely, and only in winter. Redshanks are mentioned, but their movements are of no great interest. Whimbrels, no record. Curlews occur in the schedules in every month in the year; perhaps rarest in April and May, but a flock is reported in June (1889). Many of these must be non-breeding

birds, as they breed only rarely in Orkney. They seem least common in July.

There seems to be only one real rush of waders generally reported, and that was in September 1883, when great flocks of "Sandpipers" flew into the rays of the light one night at 9 P.M.; light east-north-east wind with fog. This rush seems to have occurred also in October and November up to December 12th. There are one or two notes of interest in relation to the sea-birds, such as that on the 22d of February 1889, viz.: "Guillemots in great numbers were seen flying east, and Razorbills, a good number, were fishing about the island." Puffins arrive about April 8, and leave on or about August 15.

Terns arrive about May 10th, but are only seen about their breeding-grounds in the mornings, until they begin to breed. One year the terns left the Skerries on July 16th, which Mr. Gilmour accounted for by their being harried by some fishermen; for eight years previously they had always taken their young out, but on this occasion not one was hatched.

As showing the variety of birds that may be found there on a good migration day in spring, we note that on May 17th, 1888, Mr. Gilmour recorded in his schedule for that date the following species:—Redstarts numerous, more females than males; Ring-Ouzels; Flycatchers (species not mentioned); Black-headed Buntings; Whinchats; Wagtails (Pied); Common Buntings, and Red-breasts. This same May the Grey-headed Yellow Wagtail and Red-backed Shrike were obtained. Mr. Gilmour informs us that few birds strike the lantern in spring to those which do so in the autumn; at times moths are abundant at the light in the latter season.

We must now conclude our chapter on the Pentland Skerries and the Migration Reports. We feel we have by no means done full justice to the excellent and interesting schedules sent in by the various lighthouse-keepers, but to do that would be far too long a business for this work. We trust, however, that we have written enough to create a renewed interest in the minds of Orcadian



naturalists, and that this may bring forth fruit in the discovery of species yet unrecorded from their islands, which may turn up at these two most interesting times of the year—spring and autumn.

It may not be uninteresting to note that in 1804 the Lesser Black-backed Gull and Eider Duck were found breeding on the Pentland Skerries by a Mr. Simmonds, when on a tour round the northern lighthouses with Robert Stevenson, the eminent engineer.



## Class 1. MAMMALIA.

Sub-class *MONODELPHIA*.

Order **CHIROPTERA**.

Sub-order *MICROCHIROPTERA*.

Family **VESPERTILIONIDÆ**.

*Vesperugo pipistrellus* (*Schreb.*). Pipistrelle.

We have very few notes of bats at all, but Mr. Moodie-Heddle sends us two instances of their occurrence. One was seen in the evening flying about the rigging of a vessel lying off Fara, in the South Isles, in either 1834 or 1835. In the other case, one or more haunted a plantation at Melsetter in the summer of 1879.

We have entered these notices under this species, as, although none were secured, they are more likely to belong to this, which is the common northern form, than any other.

Mr. Reid also saw a bat caught at Kirkwall in 1861, but does not name the species.

Mr. Ranken says he has seen "bats" ten or twelve times in Orkney, always in the neighbourhood of his garden, or of the Cathedral at Kirkwall.

Mr. Harvey mentions having seen what he took to be a bird, but which was evidently, from his description, a bat, in July and August of the three successive years from 1884 to 1886, in Sanday.

*Vesperugo noctula* (*Schreb.*). Noctule.

The late Mr. Heddle had a note of one captured at S. Ronaldsay, and preserved by the Rev. J. Gerard, but this probably relates to the American bat described further on.



**Vespertilio murinus, Schreb. Mouse-coloured Bat.**

The late Mr. Heddle mentions that he saw bats in Orkney, of two species, and his son, Mr. Moodie-Heddle, records this species as occurring in Walls and Sanday.

**Vespertilio, sp.**

“*Occurrence of a Foreign Bat in Orkney.*—About September 1847 a bat was caught by some people digging potatoes in the island of South Ronaldsay, and it was kept alive for some weeks on sugar and water, I believe. It was considered a very great curiosity then, though any bat would have been equally so. I obtained the kind permission of the Rev. John Gerard to take it to London for examination. Mr. Waterhouse informs me that Mr. Gray [*i.e.* the late Dr. J. E. Gray] believes it to be a large specimen of *Vespertilio pruinus*. It is a native of North America. Its general appearance is not unlike the Noctule. The general colour may be called badger-like. A bat is a very likely animal to be brought in a ship: insects, we know, are brought from America to Liverpool in great plenty.”—*John Wolley, 3 Roxburgh Terrace, Edinburgh, November 16, 1848 (Zoologist, 1849, p. 2343.)*<sup>1</sup>

“*Occurrence of a Foreign Bat in Orkney.*—Mr. Newman in the Preface to the volume of the *Zoologist* for 1849 refers to my paper with the above heading (*Zool.* 2343). He seems to infer that it was rather ‘slow’ of me not to seize so plausible a pretext for adding a new bat to the British list. Mr. —, Mr. —, and Mr. — are men of far better spirit; they have shown some most exotic-looking birds to be truly British. But as Mr. Newman says that I ‘do not attempt to account for its presence in the Orkneys, and that the subject requires more minute investigation,’ I will now endeavour to say a little more about it than I did in my first communication. I grant that the

<sup>1</sup> *Tom. cit.* Preface, p. vi: “In *Mammalia* we have the occurrence of a new Bat, supposed to be *Vespertilio pruinus*; it was caught by some people digging potatoes in the island of South Ronaldsay, and Mr. Wolley, the gentleman who communicated the fact (*Zool.* 2343), seems content to regard the species as purely North American, although he does not attempt to account for its presence in the Orkneys. The subject requires more minute investigation. . . .”—*Edward Newman, 9 Devonshire Street, Bishopsgate, Nov. 11, 1849.*

subject requires further investigation, and such I intended to have given it during a second visit this summer, by ascertaining positively whether any bats are constant inhabitants of the Orkneys, and, if so, of what species; but I was unfortunately only there a few days, and in such weather as no bats could be expected to withstand. If I did not attempt to account for the presence of this bat, I certainly hinted at my views on the matter by saying that a bat is a very likely animal to be brought in a ship, and by observing that this specimen was looked upon as a very great curiosity, as any bat would have been. Of the circumstances of its discovery I had undoubted evidence. The people who found it were as much astonished and frightened at it as Mr. Gerard was surprised to see it; and this gentleman preserved it with great care, as a thing of most unusual occurrence, though he did not know that it was otherwise than a common bat. I may say that he is now some years past eighty, and has all his life been an observer of nature as exhibited in the Orkney Islands, and especially in South Ronaldsay. This country, entirely destitute of trees, and so exposed to every wind, seems very ill adapted for the constant residence of any species of bat; and therefore these considerations, with the evidence of the people, at once inclined me to believe it was an accidental visitant. I was told at the British Museum that the characters I had observed—the hairiness of the upper side of the interfemoral membrane, and the yellowish band of hair on the wing underneath the principal bones—were peculiar to a family of American bats, called, from the first circumstance, Lasinores, and on my bat (for it has since been very kindly presented to me by Mr. Gerard) being compared with those in the Museum, it was attributed to the species called *pruinus*, although considerably larger than the specimens in the collection, and it may perhaps be a nearly allied species. Had any species of the group been known to inhabit Europe I should have had better hopes of finding that this bat was really indigenous to the north of Britain. All things considered, I have little doubt it was brought by one of the very numerous vessels which pass between South Ronaldsay and John o' Groat's from various parts of the world, or which lie up in the far-famed roadstead,

the Long Roads (? Hope), of which South Ronaldsay forms the eastern breakwater. Very many exotic insects are introduced by vessels at Liverpool and other sea-ports, and bats can hide in a corner, and do without food in cold weather almost as well as an insect. I hope the reasons I have now stated will serve to explain my contentment in looking upon this bat as an intruder."—*John Wolley, Edinburgh, December 15, 1849.*<sup>1</sup>

*N.B.*—*Vespertilio pruinus* is recorded by Hurdiss as an autumnal straggler to Bermuda.—J. M. Jones, *The Naturalist in Bermuda*, p. 13 (London, 1859).

For the whole of this article we are indebted to Professor Newton, who kindly took the trouble to work out the history of the specimen.

## Order **INSECTIVORA.**

### Family **ERINACEIDÆ.**

*Erinaceus europæus*, *L.* Hedgehog.

Mr. Irvine-Fortescue was told that a few Hedgehogs were brought to Orkney by the sons of Dr. Logie, minister of Dirleton, and turned out about 1870. There seems to be no word of them since.

### Family **SORICIDÆ.**

*Sorex tetragonurus*, *Herman.* Common Shrew.

*Orc.* = *Rone Mouse* (J. G. M.-H.). *Sheer-Mouse* (B. and H.).

Messrs. Baikie and Heddle consider this species as not very numerous, but the late Mr. J. G. Heddle found it common in Walls.

Mr. Irvine-Fortescue has seen dead Shrews occasionally about Swanbister, and has also seen and heard them in Hoy.

<sup>1</sup> *Tom. cit.* 2813, 2814. [“A very minute description of the Ronaldsay specimen is given by J. Wolley, which occupies nearly two pages. The specimen is supposed to be in the Cambridge Museum, but Wolley seems to have had others for comparison, and, as none appear to have been labelled, the Orkney specimen cannot easily be picked out now.”]



**Crossopus fodiens** (*Pall.*). Water Shrew.

[We have no further record of this species beyond the one mentioned by Messrs. Baikie and Heddle as having been killed in Walls in 1847.]

## Section ARCTOIDEA.

Family **MUSTELIDÆ**.**Lutra vulgaris**, *Erxl.* Otter.

The Otter is the only species of this genus found in the Orkneys.

Otters are yet abundant in most of the islands, the large extent of seaboard giving them great facilities for escaping observation and for concealment. In the early spring they wander much up and down the inland streams, and make regular roads in cutting off corners from one pool to another. This, and the green mounds on which they leave their droppings, which latter always seem very small for the size of the animal, betray their presence anywhere, although the animals themselves are rarely seen. The greater part of the year they keep to the sea-coast, where they live on fish, especially flounders, and, as we are informed, on ducks and rabbits. Mr. Moodie-Heddle tells us that they always leave the stomach of any fish they eat.

The same gentleman also says: "I have killed many Otters, and had the young ones to about a year old. They are playful and easily tamed, and quite as good-tempered as an average young dog. They show more activity early in the morning, and again in the evening, than at mid-day. The danger of losing them in fostering is in their getting milk beginning to turn sour; this with them, as with young seals, brings on diarrhoea, which is usually fatal. I can usually find an Otter, if about, and have had as many as thirty skins at one time."

Mr. W. Harvey writes us from Sanday that a few years ago an Otter "made her habitation and brought forth her young within 150 yards of this (his) house, entering at the mouth of a drain" (*in lit.* January 2, 1888).

The skins of those Otters that frequent the sea and sea-shore

are better and darker than those that frequent more inland situations.

Otters are said to breed twice a year in Orkney, in spring and autumn, and to bring forth from two to five young.

Very few otter-skins ever appeared among the exports from Orkney. In 1804 there were three, and in 1805 there were nine.

### Sub-order *PINNIPEDIA*.

#### Family **TRICHECHIDÆ**.

#### *Trichechus rosmarus*, L. Walrus.

Although we might reasonably presume that the Walrus was of considerably more frequent occurrence in former years, when the animals themselves were abundant in their more natural habitat, we seem to have no records to prove this. The first mentioned by Baikie and Heddle was killed in Eday in 1825, and another is reported to have been seen in Hoy Sound in 1827.

Professor Heddle of St. Andrews told Harvie-Brown that he himself saw an adult and young Walrus in 1849 or 1850 off the coast of the parish of Walls: and in a copy of Baikie and Heddle containing some MS. notes by one of the authors—R. Heddle—which we have lately had the pleasure of examining, there is this statement: “that a Walrus was seen off Eday in 1855, and (another) in the Pentland Firth off Waas,<sup>1</sup> in 1856.”

In an extract from an article in Hardwicke's *Science Gossip* on the Seals and Whales of the British Isles, Dr. Brown states that two Walruses were seen in 1857, one in Orkney and the other in Shetland.

Mr. Moodie-Heddle tells us that there is an instance of a Walrus occurring at Longhope, not mentioned by Baikie and Heddle. “In this case it annoyed people going to church by putting its tusks over the gunwale of the boat!! I saw one just outside the surf during a westerly gale about 1863-4, at Hawick, near Longhope. The tusks were quite visible, but not very large.”

“Whale-ships have several times come into Longhope of recent years, with young Walruses on board.”

It seems to us that this last sentence may account for one

<sup>1</sup> Waas = Walls.

or two of the Walruses seen in Orkney, more especially in the case of the one just mentioned as being so familiar.

### Family PHOCIDÆ.

#### *Phoca vitulina*, L. Common Seal.

Orc. = *Selkie*.

Low speaks to the abundance of seals in the Pightland (Pentland) Firth, and in his *Fauna Orcadensis*, p. 18, says: "Seals seem to be subject to a plague or murrain. About four years ago they drove ashore around our coasts in scores."

This "murrain" seems to have occurred twice since then, once in 1836, and again in 1869 or 1870, since which time certain bays have been quite deserted by seals.

In the old *Statistical Account*, 1797, vol. xix. p. 398, there is a description given of a seal-fishery formerly held at the "Barrel of Butter,"<sup>1</sup> and the seals there caught would most probably be of this species; at the present time seals are rarely seen in that neighbourhood.

Amongst the Orkney exports for 1801 appear 12 seal-skins; in 1802 there were 373, and in 1803, 14 only. It is just possible that these may have been the last of the fishery on the Barrel of Butter.

Mr. Moodie-Heddle sends us the following very interesting notes:—

"Seals are still common in the South Isles, though their haunts have somewhat changed since 'Baikie and Heddle' was published. Ten years ago they were nearly extinct here (in the island of Hoy), being reduced to three or four. I preserved them near Melsetter, and they got so tame that I could come within a few yards of them, and even handle the young ones. Since then they were getting too numerous, and killing so many sea-trout that we have had to slaughter a good many."

"The Common Seal calls out very much before any markedly bad weather."

"In places where they lie much ashore, and are constantly crawling over rough rocks, the nipples of the females seem to get painful, and they repulse the young when they attempt to

<sup>1</sup> Barrel of Butter—a small skerry lying in the middle of Scapa Flow.

suck. Frequently the young ones on these occasions crawl up to the houses, and get fed with cow's milk, though, from inattention, they rarely survive."

"On dissection of males of *P. vitulina*, I have several times been struck with the peculiarity of there appearing to be four or more testes."

In answer to some questions we put to Mr. Moodie-Heddle on these notes we received the following answer:—

"The young seals were at a place where they were preserved, but the incident has happened elsewhere. The last case when one was fed was two years ago; but a young one was going about the beach neglected by its mother last summer (1887), and was more than once taken and put into the water near the other seals by the people. Another got into a crack in a rock, and had to be helped out by a man; the mother remaining in the water close by. The young one referred to first was ultimately taken up here by a Mr. Curzon, who was collecting insects, to whom I gave it, but it took diarrhoea, and died about ten days after."

"Seals know very soon when they are safe. I could get within 30 yards of some where preserved, whilst the *same seals* would not let me within 150 yards, when at another beach some miles off. They actually got so tame with us that I have known two young ones killed with stones by some navvies working on the road; and one, half-grown, picked up *asleep*, and taken into a ship's boat (it was *floating asleep*)."

"They will stand a few shots, as long as none are killed, without much alarm; but if one is killed near a rock they either desert it or are shy of it for some time. Seals not only leap before bad weather, but call out, making a strange wild sound—at night in particular. They jump much, and pursue one another at the breeding season, and appear, in copulation, to thrash the water into foam."

In 1883 we found this species of seal abundant at most of the skerries lying inside the islands between Kirkwall and Rousay, and on one occasion counted as many as thirty heads up at one time near the Taing Skerry, which lies between Gairsay and Shapinsay. From being constantly fired at when ashore,



they rarely venture to land on any of the larger islands now, keeping almost exclusively for that purpose to the before-mentioned skerries; three that we procured, all females, had small-shot buried in their blubber.

As autumn approaches, and possibly on account of the young ones getting stronger, and more able to follow the mother, the seals congregate less together, and are to be seen more about the island shores.

When in Orkney in 1888, Buckley saw the seals referred to by Mr. Moodie-Heddle, and they were wonderfully tame. He was told that it was only the *habitués* that were so tame, strange seals that often came to join this herd being very uneasy at the approach of any one. One day fifteen were counted at the stones, at another time twenty-three, the former number being the usual complement.

We saw many seals the same year at the "Grand" of Egilsay, a long narrow reef of rocks running out a long way to the east of the island; we found them also numerous at Linga Holm, near Stronsay.

### *Phoca hispida*, Schreb. Ringed or Marble Seal.

[*Obs.*—We have no information about the occurrence of this seal in Orkney further than the bald statement by Messrs. Baikie and Heddle that one or two specimens have been obtained.]

### *Phoca grœnlandica*, Fab. Greenland or Harp Seal.

We have not heard of any more specimens of this species having been obtained here since Messrs. Baikie and Heddle wrote. As, however, it has occurred on different occasions on the Mainland of Scotland, both east and west, it is quite likely to have paid these islands a visit, and even been shot, without much attention being paid to the fact.

In a note just received from Mr. Moodie-Heddle, referring to some Great Grey Seals that were found dead, he says there was one he heard of that was marked exactly like a Greenland or Harp Seal, and was of large size: it had no head when found. This was in the winter of 1889-90.

## Halichærus gryphus (*Fabr.*). Grey Seal.

Orc. = *Selkie*.

It has now been pretty well decided that all the notices of *P. barbata* should really be referred to this species, and this is the course we have here adopted.

Pitcairn, in his *Retrospective View of the Scotch Fisheries*, 1787, makes mention of the great abundance of the seals at Stack and Skerry<sup>1</sup>—"as the author has seen from 500 to 1000 Seals caught in little more than forty-eight hours' time, from a rock that lies about eight leagues to the westward of Hoymouth in Orkney, where there are great numbers of them, and in many other places thereabout."—*Vide* p. 37.

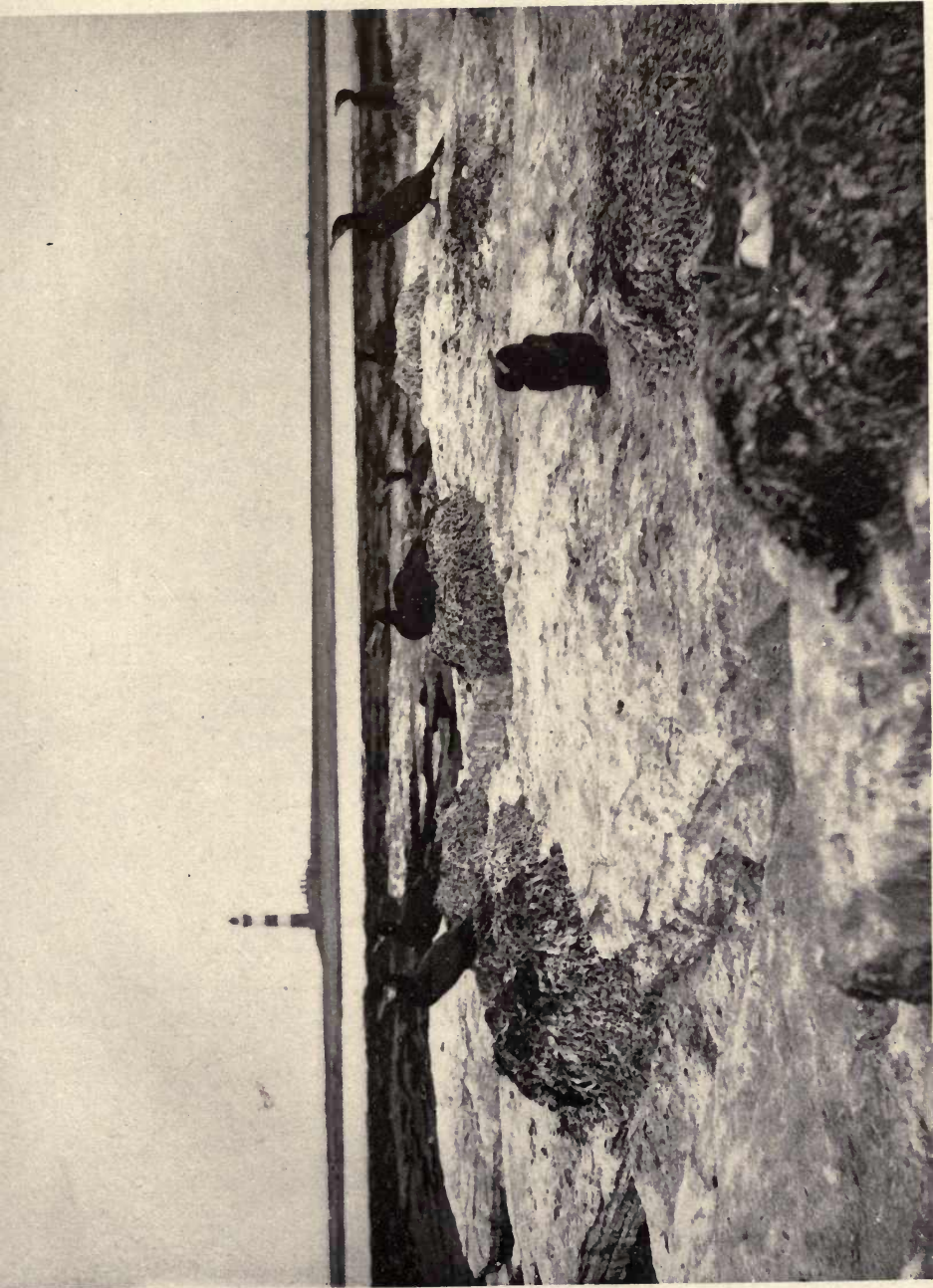
At p. 436, vol. xvi. of the old *Statistical Account*, 1795, there is mention made of a seal-fishery at Soulisgeir. A large sloop used to go there once a year about Martinmas, but since a fatal accident, which took place in November 1786, it had been given up. In 1792 thirty-six sealskins were sold at Stromness at 2s. 6d. each.

The Grey Seal certainly is not common in the more sheltered firths about the Mainland, Rousay, Gairsay, and Shapinsay, as, during the time we were in Rousay (and we were constantly cruising about in a small boat, seeing plenty of the Common Seal), we could only identify the present species on two occasions. One of these occasions was at the west end of Viera, where a Grey Seal kept its head out of the water and its nose straight in the air for two or three minutes at a time between each submersion, and always appearing in the same spot.

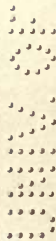
It is probable that the Grey Seal breeds in Sanday, as Mr. Harvey tells us that young seals with long shaggy whitish hair have been frequently found alive along the shores of that island, and that they are about 4 feet in length. Mr. Irvine-Fortescue was informed that a large seal is seen swimming into the caves round Stronsay, and he remarks that a few are usually to be seen about the South Isles also.

Speaking of seals generally in Sanday, Mr. Harvey writes

<sup>1</sup> Rocks lying about forty miles north-west of Hoy Head, much frequented by seals, and already described, *vid.* pp. 45-48.



CORMORANTS NESTING ON SEAL SKERRY. N. RONALDSAY.









us: "I have shot a good many seals of various colours and sizes, some a dusky red, some a dark mottled grey, a few very light grey, with streaks of white. One was a very old seal, nearly white, whose teeth were worn away, and drops of lead<sup>1</sup> had apparently been imbedded in his head and neck for years. The skin was very pretty, but the oil (? blubber) was scant and thin like grease. He measured 9 feet in length.

"I have got Common Seals from 5 to 9 feet long, and Great Seals from 9 to 12 feet in length. About twenty-five years ago I observed one with the largest head I ever saw, about 200 yards from land. I struck him with a ball and wounded him. About a fortnight after, he was found ashore at Elsness by a farm servant, who afterwards informed me that the 'selkie' was as big as a large horse, and measured 15 feet long, and that he got about 12 gallons of oil from it."

"The Great Seal used to be frequently killed on the 'Selky' skerry, lying north of the island of N. Ronaldsay; they are there called Orkenies."

Harvie-Brown visited this skerry in July 1889, and saw several Grey Seals in the water, but none on shore, as some boats had just passed the skerry and disturbed them.

Mr. Moodie-Heddle says that this last winter (1889-90) several Grey Seals came ashore, dead, on the Firth side of Hoy, along with multitudes of Cormorants, Auks, etc., apparently from want of food.

The same gentleman has had the young of this species tame, and says they are very faithful and fond of following their owners about, but he does not consider them as intelligent as *P. vitulina*.

### *Cystophora cristata* (Erxl). Hooded Seal.

[Obs.—Besides what Messrs. Baikie and Heddle say as to the reputed occurrence of the Hooded Seal in Rousay and Papa Westray, Mr. Moodie-Heddle's father mentioned that he once or twice saw what he took for this seal at a little distance. We prefer to keep this in brackets for the present, as, had a

<sup>1</sup> *Anglicè*, shot.

specimen of such a striking-looking beast been procured, it is more than likely that some special notice would have been taken of it.]

## CETACEÆ.

*Obs.*—Mr. Moodie-Heddle says that there is still considerable mystery attaching to the species of whales obtained in Orkney. He is inclined to think that two species of high-finned Whales are confounded, as also two species of Cachalot. A large whale of close on 60 feet in length was ashore and nearly captured at Longhope about 1880. This was evidently a Cachalot, but did not appear high or square-headed enough for *Catodon macrocephalus*.

That our notes on whales are very imperfect we are well aware, but we have tried to make them as accurate as possible.

Probably there is no class of mammals so little known to the ordinary naturalist as the Cetaceæ. This of course arises from the extreme difficulty of studying them in their native haunts; their comparative rarity, except certain species, and the incomplete view one gets of them in their natural element, render it exceedingly difficult to recognise them either there, or even when stranded on the beach.

When a huge Rorqual is seen “blowing”—the commotion caused thereby, resembling the ricochet of a cannon-ball out at sea—that is perhaps put down as a “Finner” if one of the party who sees this phenomenon knows anything at all of whales, but whether the rare Sibbald’s, or the Lesser, or the Common species it is impossible to tell. Again, a lesser animal is seen to send up a much smaller jet. “There goes a Bottlenose,” says one; but how many species again are included in that extraordinary term! Any small black animal showing its back here and there every now and then above the water is put down, and very often rightly, to a Porpoise, but how many would know that beast when lying dead before them! And the word Dolphin is used pretty much in the same way. From their position, the Orkney Isles, with perhaps the exception of

the Shetland Isles, present the greatest facilities of any part of Great Britain for studying the habits, or giving records of the capture of these, literally, monsters of the deep, though unless there be a naturalist on the spot one is more likely to hear how much oil, spermaceti, or whalebone a defunct whale affords, than of what species it is, or what are its measurements.

### Order **CETACEA.**

#### Sub-order *MYSTACOCETI.*

#### Family **BALÆNIDÆ.**

#### **Balæna mysticetus (L.).** Greenland Whale.

Low writes in his *Fauna* that, even in his time, this animal had, to a great extent, taken leave of our seas, as he supposed, on account of the increase in shipping and consequent disturbance. He says that several have come ashore of late years (*i.e.* subsequent to 1770 or thereabouts), mentioning one in particular 40 feet long. This came ashore in Walls.

Mr. Moodie-Heddle's father has left a note that this species is now very rare, those that occur being either weak or diseased animals.

One was said to have been got at S. Ronaldsay in 1828, but Mr. Cowan tells us he does not believe that the true Greenland Whale was ever seen in the Orkneys.

#### Family **BALÆNOPTERIDÆ.**

#### **Megaptera longimana (Rudolph).** Hump-backed Whale.

Mr. Cowan says this species is rare in Orkney. We have no special record of any specimen.

#### **Balænoptera musculus (L.).** Common Rorqual.

Orc. = *Finner*.

This is probably the whale referred to by Low, which he says is seen most frequently in the autumn, when the sounds and seas

are full of herring and mackerel. Several of our correspondents state that this is a common species, and Mr. Reid informs us that specimens from seventy to eighty feet in length have occasionally come ashore. One was got at Hunda in 1852 which was 62 feet in length.

Mr. Irvine-Fortescue says this species is occasionally seen in Scapa Flow. He has never seen more than three together, and this only on one occasion. They appeared to be a family party, as one was much smaller than the others, and they were frequently seen during the whole of one summer.

### *Balænoptera sibbaldi* (Gray). Sibbald's Rorqual.

Mr. Moodie-Heddle says that a specimen that appeared to be of this species ran ashore at Longhope in either 1883 or 1884: it was over 50 feet long, and the head seemed smaller than in *C. macrocephalus*.

### *Balænoptera rostrata* (Fabr.). Lesser Rorqual.

Under this heading Mr. Irvine-Fortescue writes us as follows:—

“What I believe to be a specimen of this whale was picked up dead in Scapa Flow in the end of 1884, and brought to Waulk Mill Bay. I took the following measurements:—Total length in a straight line from head to tail, 24 ft. From tail to front side of back fin, 8 ft. Breadth of tail, 6 ft. 8 in. Half the girth of the animal, 8 ft. (this would give 16 ft. as the girth). Fore flipper, 2 ft. 10 in. long, 1 ft. 10 in. girth, 11 in. broad. Twenty-seven corrugations or folds in half of belly (this would give fifty-four altogether). 12 ft. 5 in. from tail to the commencement of the folds. Dorsal fin, 1 ft. 3 in. high; 11 in. broad at base. Whalebone about 14 in. long when longest; pale pinkish white or cream colour, except along the outer edges of the plates, which were dark-coloured.”

“The animal was a female, and contained a foetus about 6 ft. long, but this I did not see.”

“What I take to be this whale appears not unfrequently in Scapa Flow, singly and in twos and threes.”



Sub-order *ODONTOCETI*.Family *PHYSETERIDÆ*.Sub-family *PHYSETERINÆ*.*Physeter macrocephalus*, *L.* Sperm Whale.

While Low says this species is often driven ashore, and instances one taken in Hoy Sound, later writers all concur as to its rarity, and this seems most likely, seeing that this species is more southerly in its range.

*Hyperoödon rostratum* (*Chemnitz*). Beaked Whale.

There can be no doubt whatever that, although we have received no actual record of the capture of this species from any of our correspondents, the Beaked Whale is a common animal at times round the coast. It is unfortunate that the name "Bottlenose" is applied in so comprehensive a manner, as it seems to include every cetacean smaller than a Rorqual.

Family *DELPHINIDÆ*.Sub-family *BELUGINÆ*.*Delphinapterus leucas* (*Pall.*). White Whale.

A White Whale was stranded at Auskerry in October 1845, after a gale of easterly wind (*Bell. Brit. Quad.*, 2d ed.). We have no further record to add to this.

Sub-family *DELPHININÆ*.*Orca gladiator* (*Lacép.*). Killer. Grampus.

Low mentions this species as found in great numbers on all the coasts, and at certain times at the mouth of Hoy Sound.

Messrs. Baikie and Heddle consider it to be commoner during the herring season than at other times, which is very probable, from the greater abundance of food.

Mr. Moodie-Heddle says the Grampus is not very common near land, but is oftener seen out at sea.

On July the 8th, 1890, not very far from the entrance to Scrabster Bay, we saw from the deck of the yacht six or more of what we took to be specimens of this species. They passed close under our keel, and were visible for a considerable time, both before and after this dive downwards. They swam near the surface, frequently flinging themselves perpendicularly out of water, the whole length of the body from head to tail being visible, and continuing this exhibition as far as our vision could follow their motions, all following nearly the same track, in a smooth sea. The very white appearance of the under parts was strikingly apparent both beneath the water and when springing out of it.

### **Globicephalus melas** (*Trail*). Pilot Whale.

Orc. = *Bottlenose*.

A common species, occurring in very large herds at times, rarely under 100, and as high as 500 individuals.

From the comparative ease with which they are driven ashore arises their trivial name of "caing," or driving. Often this word is spelt with an apostrophe, thus, "ca'ing," but this is a mistake, as, with the apostrophe, it means "calling," which is altogether misleading.

As early as 1691, Wallace (2d ed.) mentions 114 of these whales as driven ashore near Kairston, on the Mainland, and since then, so common is the practice, that it is needless to give every individual case; but, as showing their value, we may mention that about August 1839, 195 of these creatures were secured off Flotta, and fetched a total of £500, 12s. 6d.

Mr. Moodie-Heddle informs us that "they breed at all seasons. I have taken full-grown young, and a foetus of a few

inches long, out of whales in the same school, in July. When many have to calve, they seek sheltered water for the purpose. I once saw Scapa Flow full, on such an occasion—many thousands, extending for miles.”

“The Caing Whale is fond of following a leader, and, in absence of any ‘flecked’ whale, follows usually some old male of its own species, as if trusting to his age and experience; even if he be wounded and runs on shore they follow.

“They seem to see well in the air, as I have noticed them rise up as if ‘treading water,’ and take a prolonged and steady look at a boat, when 15 or 20 yards off only.”

The Caing Whale feeds on cuttle-fish. In the stomachs of some run ashore in November 1889 Mr. Irvine-Fortescue found handfuls of the beaks of these creatures.

They only appear in Scapa Flow occasionally, several years frequently passing without a whale-hunt taking place. Of those run ashore on the occasion last referred to, in Weethick, on the east side of Inganess Bay, Mr. Irvine-Fortescue found the largest bull measured 21 ft.; the female was considerably less. The smallest female containing a foetus was 14 ft. Two foetuses measured 6 ft. each, and another born on the beach was also 6 ft.

The same gentleman also remarks that he never heard one of these whales make the slightest cry, but some of the men who were killing them last November (1889), said that when they were being killed “some cried like pigs, and others bogled,” *i.e.* bellowed.

### *Phocæna communis*, *F. Cuv.* Porpoise.

Common in summer and autumn.

### *Delphinus acutus* (*J. E. Gray*). White-sided Dolphin.

*Orc.* = *Flecked* or *Flaked Whale* (*J. G. M.-H.*).

Mr. Moodie-Heddle has kindly sent us a very good drawing, description, and measurements of one of these animals, which

were taken from one, evidently a male, killed at Scapa, in 1858. The measurements correspond in all respects with those given in Bell's *Brit. Quad.* (p. 471, 2d ed.), which were taken by Dr. Duguid from one killed at the same time and place, as we show further on.

They are not very rare animals, as Mr. Moodie-Heddle has seen many, and three ran ashore at Melsetter at one time, in 1886.

The local name for this species is the Flaked or Flecked Whale, probably from its markings, and we think the following quotation from one of Mr. Moodie-Heddle's letters will be of interest :—

“When the Flaked (*i.e.* flecked) Whales, as the people call *D. tursio* (? *D. acutus*) here, get among the herd of Caing Whales, the latter refuse to ‘drive,’ the Flecked ones always turning off shore as soon as the water shoals, and the Caing Whales following them.”

The following very accurate description is from one taken at the time and place above stated :—

“Dark mark round eye,  $\frac{3}{4}$  in. wide; eye small, pupil crescentic. The blow-hole is situated between the eyes; crescentic, the concave side towards the snout, depressed. An external auditory meatus is situated superior and posterior to the eyes, over the anterior edge of pectoral fin, and would allow a No. 1 pellet of shot to pass through.

“The head sharp and beaked, the lower jaw a little longer than the upper. Teeth  $\frac{29 : 29}{32 : 32}$  largest in the middle of each jaw, and gradually diminishing in size towards each side. No teeth at symphyses of each jaw for the space of an inch. Teeth conical, slightly recurved and incurved at back, straight in front; those in lower jaw most incurved, while those in the upper point forward.

Palate smooth and spotted. Tongue not free, but frenum being large admits of great movement; black in centre, white at margin. At symphysis of lower jaw lip turned upward, and has two slight elevations, which fit into corresponding notches in upper lip. There is a regular prolabium in upper lip so as to give it a pointed appearance. Colour of back *jet* black; long streak



towards tail, of a dirty yellowish colour; sides dusky, with conspicuous oblong white streak along middle. Fins and tail black, except a small portion of under part of tail."

For these measurements and description we are indebted to Mr. Moodie-Heddle.

### *Delphinus tursio*, *Fabr.* Bottlenosed Dolphin.

Mr. Irvine-Fortescue sends us the following notes of two Whales which were stranded alive inside Swanbister Pier, in September 1888. He was from home at the time, but a friend of his, Mr. Halcro, took the following measurements and description, which seem to refer them to this species:—

"Length, 8 ft. 6 in.; diameter of bodies, 22 in. (this would give the girth about 5 ft. 6 in.); tail, 2 ft. broad; dorsal fin, 13 in. high, about centre of back, *i.e.* about half-way between head and tail; dentition,  $\frac{23:23}{25:25}$ ."

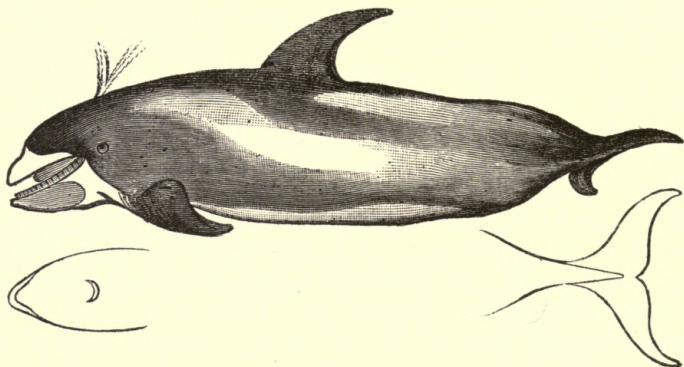
"The two were male and female. The species could probably still be determined from the skeleton."

"This may be the species which I have observed occasionally among the herds of bottlenoses (Caing Whales). They appear to be about 5 ft. long or rather more, and paler in colour than the Caing Whales. The dorsal fin is higher in proportion to their size, and sharper-pointed."

### *Delphinus albirostris* (*J. E. Gray*). White-beaked Dolphin.

We are indebted to Mr. Moodie-Heddle of Melsetter for the following measurements, and the drawing from which our engraving is taken, of a specimen of this species, which is now recorded from Orkney for the first time:—Entire length, 9 ft. 1 in.; girth at fin, 5 ft. 4 in.; length of mouth,  $10\frac{1}{2}$  in.; from snout to blow-hole, 1 ft. 2 in.; from blow-hole to dorsal fin, 2 ft. 9 in.; length of dorsal fin along curve, 2 ft.  $2\frac{1}{2}$  in.; height, perpendicular, of fin, 1 ft. 2 in.; length of pectoral fin, 1 ft. 8 in.; breadth of tail, 2 ft. 6 in.; dentition,  $\frac{26:26}{23:24}$ .

Eyes and blow-hole in one line across. The lower jaw projected about 1 inch beyond the upper.



The upper snout, as far as the depression at forehead, and to the angle of the mouth, pure white; also white from mouth to pectoral fin and on the belly; two finely shaded whitish bands on each side; other parts from a grey to purplish black.

The teeth were conical, sharp, and bent inwards and backwards. Tongue large, and of a livid colour. Blow-hole single, and a full crescent.

The animal from which this description was taken was shot at Longhope on June 28th, 1853. When on shore, it respired deeply, this being heard at some distance; it squeaked on being lanced, and had but little blubber.

Seven or eight of these animals had frequented the shallow bay at the top of Longhope for some weeks before being chased. They were observed to swim with more rapidity than the porpoise, and rose higher out of the water.

The drawing and description we sent up to Mr. Southwell, who kindly identified the animal for us.

Order **UNGULATA.**Sub-order *ARTIODACTYLA.*Family **CERVIDÆ.****Cervus tarandus, L. Reindeer.**

There seems to be no actual proof that the Reindeer existed in Orkney within historic times, nor do we remember hearing or reading of either the bones or horns of this animal ever being found in any of the numerous brochs that have been opened in the islands from time to time.

Certainly it would be a curious thing if the former Orkney notables took the trouble to cross the stormy Pentland Firth to hunt an animal that could be found at their own doors, especially when, from all we can now make out, the Reindeer was by no means abundant when they did arrive in Caithness.

At page 19 of their work, Messrs. Baikie and Heddle refer to the introduction of the Reindeer into Orkney, but give no further details. We have tried to collect all the information we could on the subject, and we here append the results. Mr. Henry Leask, of Boardhouse, by Stromness, writes as follows:—

“In reply to your inquiry about the reindeer introduced into Orkney, I am sorry that I can give you little information. I presume they must refer to a few reindeer brought from Archangel about seventy years ago by Mr. Robert Traill, son of Provost Thomas Traill, of Frotoft, and sent to his farm of Wideford, about two miles east of Kirkwall. I remember seeing them there, once only, and I should say there were three, four, or perhaps six, but not more than six. I do not know how long they lived, nor the cause of their death. I would presume want of their natural food and climate.”—*18th Jan. 1888.*

In another letter, dated 30th Jan. 1888, Mr. Leask writes:—

“The excessive dampness of our climate would alone, I suspect, account for their death, apart from any lack of their most usual food. There is now nobody I know of who can

give information about them ; indeed, very few whose memories look so far back."

Mr. Moodie-Heddle of Melsetter tells us that a MS. note by the late Dr. Traill of Woodwick mentions that the deer spoken of by Baikie and Heddle died the first winter, the climate not agreeing with them.

At Westness House, Rousay, is, or was in 1883, a pair of Reindeer horns nailed up near the front door, but inquiry from the owner, General Burroughs, failed to discover from whence they came ; possibly they might be a pair belonging to one of these imported animals.

Since the above was written, Mr. Cursiter has pointed out to us that the fact of the re-introduction of the Reindeer into Orkney was noticed in the *Proceedings of the Antiquarian Society of Scotland*, and that a full account is given in their 8th vol., old series, at p. 216.

### *Cervus elaphus*, L. Red Deer.

There seems to be no historic evidence of when the Red Deer died out in Orkney, though the shed horns found in the peat-mosses of the Mainland seem to testify to their having once inhabited these islands.

Since then, however, the late Mr. Heddle of Melsetter procured a young stag and two hinds from Caithness, which bred several seasons about the farm, but were too tame to stock the hill.

Mr. Moodie-Heddle further adds: "We had a hind at Melsetter about 1851, and got two other young ones and a young stag about 1860 ; they bred until we had some thirteen or fourteen. The old ones were *too* tame ; only a few of the younger ones would keep to the hills. There was so much annoyance about the crofters' crops that I killed them all off in 1870-72, except one<sup>1</sup> hind which is still on the hills. They thrive perfectly" (*in lit.* Jan. 1888.)

We saw some of the horns of those that were killed off, when in Hoy in 1888, and they were fine and well-shaped.

<sup>1</sup> Found dead in the spring of 1889.



In vol. ii. p. 141 of the *Journal of the Royal Physical Society of Edinburgh*, the remains of Red Deer, along with tusks of Wild Boar, and bones of Sheep, Cattle, and Horses, are recorded as having been found at Skail.

Many Red Deer's horns, both shed and attached to the skull, are in the collection of Mr. Cursiter at Kirkwall, all of which have been found in some one or other of the islands. The same gentleman also has some bones which he is inclined to believe are the legs of deer: these, if belonging to that animal, are of much greater value in determining the former existence of the species in Orkney than are horns, which may well have been imported from Caithness and Sutherland for useful purposes.

From their never being mentioned in the old Sagas as inhabitants of the islands, it would appear that the Red Deer was extinct before the Norse times, the hunting of both the Rein- and Red-Deer by the Jarls in Caithness being especially mentioned.

In *Rod and Gun* for Nov. 14th, 1889, it is mentioned that "some time ago Mr. John Spence, Barony, Birsay, found, at a depth of about five feet, in peat-moss, a deer's foot; and now Mr. J. B. W. Stevenson, Overstanger, in the same parish, has brought to light a deer's horn, jaw, and feet. They were found imbedded in the middle of the dried bed of Loch Isbister, at the depth of about a foot from the surface."

## Order **RODENTIA**.

### Sub-order *SIMPLICIDENTATA*.

#### Section MYOMORPHA.

#### Family **MURIDÆ**.

*Mus sylvaticus*, L. Longtailed Field Mouse.

Mr. Moodie-Heddle corroborates the statement by Baikie and Heddle that this species is common in Orkney; we have not ourselves met with it.

**Mus musculus, L. Common House Mouse.**

Abundant everywhere. In a note by the late R. Heddle, one of the authors of the *Hist. Nat. Orc.*, it is stated that the "Button Mouse" mentioned in a foot-note at p. 15 of the above work, "is the young of *Mus musculus*, the colour heightened by open-air life.—R. H., 1856."

In the *Northern Ensign* of May 1857 it is recorded that no less than three thousand four hundred and ten mice were killed on the farm of Husbay in Stronsay, in a few days, while thrashing out some stacks, besides what were destroyed by dogs or escaped.

**Mus rattus, L. Black Rat.**

In the old *Statistical Account* for 1793, vol. vii. p. 546, it is said that the "Black Muscovy Rat, which is the only one now to be met with (in Orkney), has destroyed the Grey or Brown Rat." This seems to be reversing the general order of things.

In Baikie and Heddle's time the Black Rat was said to be confined to the island of S. Ronaldsay, and was even then (1848) decreasing fast, thus corroborating Low's statement. Mr. Ranken, writing in 1889, says that the last Black Rat he *heard* of, was killed by a horse treading on it in a stable, at Osquil (?), in the winter of 1877-8. Unfortunately a cat had gone off with the remains, so that Mr. Ranken was unable to verify this instance.

Mr. Moodie-Heddle says the Black Rat is getting rare, but is still to be found in S. Ronaldsay; we have not had as yet any opportunity of personally verifying the latter statement.

**Mus decumanus, Pall. Brown Rat.**

Orkney does not seem to be altogether the happy hunting-ground of the common rat, as he has a habit, unhappily unknown on the mainland or others of the British Isles, of dying out of some of these islands. Thus rats, which were introduced into Rousay, left somewhere about 1836, according to Baikie and Heddle, and were unknown there in 1883, when Buckley was there. And,

*à propos* of this migration, Mr. Moodie-Heddle tells us that "Captain Balfour, father of the late David Balfour of Balfour and Trenabie, said he saw the rats leave Rousay in a body, and take to sea. It is only recently that the Brown Rat got a footing in S. Ronaldsay" (*in lit.* Jan. 6th, 1888.—J. G. M.-H.).

Fea, pp. 43, 44, of his *State of the Orkneys and Shetland*, says:—"Rats will not live in the island of Eday. Some years ago a ship laden with wheat was wrecked on this island. The rats with which the ship swarmed immediately swam ashore, but all of them died in the sight of the inhabitants."

In a note by the late Mr. J. G. Heddle of Melsetter he says that in 1858 rats were extinct in Stronsay and Shapinsay, but that they appeared again in Stronsay in 1868. Mr. Harvey, writing us from Sanday, 28th Jan. 1888, says:—"I have of late been carefully considering the habits of the rat, so abundant in this island, and I have come to the conclusion that we have only one species. I got one lately that measured fully 9 inches long, the tail being about the same length. It is to be found in our office-houses, barnyards, fields, and about the sea beaches and loch sides. Our cats do not care to encounter them, but some dogs are eager to kill them.

"It is a fact that Rats do not live in the island of North Ronaldsay. Several have been landed from stranded ships, but were found dead in a short time. I have this information from good authority. It is also reported that the rat is not to be found on one or two other islands."

On the Mainland rats haunt the large heaps of rotten fish that are placed in the corners of the fields for manure, these heaps and the sides of the banks adjoining being riddled by their holes.

Sub-family *ARVICOLINÆ*.

*Arvicola amphibia* (L.). Water Vole.

[*Obs.*—In reference to the Water Vole said by Messrs. Baikie and Heddle to have been taken at Rackwick in 1844, Mr. Moodie-Heddle writes us that he has never seen the species in Hoy. We ourselves never came across a specimen, and so for the present we think it better to keep the note in brackets.]

**Arvicola agrestis, De Selys. Common Field Vole.**

Orc. = *Cuttick* or *Levellyn*.

A very abundant species through most of the islands of the group, their runs being very conspicuous through the moss and grass. Curiously enough, however, they seem to be entirely absent from the whole of the island of Hoy, as Mr. Moodie-Heddle informs us, and we certainly saw none there in 1888, though their presence was detected on all the other more important islands we visited.

Sub-order *DUPLICIDENTATA*.Family **LEPORIDÆ**.**Lepus europæus, Pall. Common Hare.**

Although Low in his *Fauna Orcadensis* makes no mention of hares as inhabiting the Orkneys, yet in his *Tour*, made in 1774, at page 11, he says:—" . . . by a Mr. Moodie of Melsetter, who likewise introduced hares and partridges into the island (Hoy), neither of which seem to have thriven, owing probably to the great number of ravenous birds in their neighbourhood, and the want of proper shelter from them." From this internal evidence it would appear that the *Fauna* was written before he undertook his *Tour* through the Orkney and Shetland Isles.

Since then the Brown Hare was introduced into the Mainland by Malcolm Laing the historian in 1818. For some reason or other this attempt appears to have failed; but another by his brother, S. Laing, and Baikie of Tankerness, about 1830, was more successful, and at the present time hares exist on several of the islands, Hoy, Eday, Rousay, Shapinsay, the Mainland, and S. Ronaldsay; to this latter it was introduced by Lord Zetland. Until lately they existed also in Papa Westray; but, since the departure of the Traills, the inhabitants have exterminated them; they were introduced there either by the present Mr. Traill or his father.

Mr. Heddle's father coursed hares in 1831, though he does not state whether in Hoy or the Mainland; this would seem,



however, to imply that in either case all the first importations had not died out.

In their work Messrs. Baikie and Heddle state that hares existed only in Hoy and the Mainland in 1848.

Mr. Moodie-Heddle tells us that, after their introduction to some of the islands in Orkney, he has seen hares that almost any one would have taken for a Blue Hare in summer coat; and we ourselves were quite struck with the colour of the Rousay hares; they seemed darker, and had not that rich reddish brown that they have on the mainland of Scotland.

The same gentleman tells us that hares grow extremely heavy, especially when newly introduced into an island. A man, Guthrie, who used to drive the coach from Kirkwall to Stromness, assured him that he knew of one killed on Wideford Hill weighing 14 lbs!

We saw plenty of Brown Hares in Hoy and the Mainland in 1888, wherever they were looked after and the ground was suitable. Tame cats, of which there are so many in Rousay, are their greatest enemies, both there and on the other islands.

In a further note by Mr. Heddle he says the average weight of hares in Orkney is 8 lbs. They sometimes vary so much in colour as to resemble *L. hibernicus*, locality, and not the season, seeming to cause this.

### *Lepus variabilis*, Pall. White Hare.

White Hares existed in Orkney at the commencement of, if not even later than, the sixteenth century. In an old work, the title of which is *Descriptio Insularum Orchadiarum per me, Jo. Ben, ibidem colentem, in anno 1529*, is the following paragraph:—*"Albi lepores hic sunt, et capiuntur canibus."* Jo. Ben was John Bellenden, Archdeacon of Moray.

The foregoing paragraph refers to Hoy, and Barry has inserted the translation into his *History of the Orkney Islands*.

Mr. Moodie-Heddle informs us that the bones of this species are still sometimes found in the "Picts' houses."

The White Hare has since been re-introduced into Gairsay by

Col. Balfour (about 1875). There were ten or a dozen turned down; but some of these were found to have had their legs broken on arrival, and may possibly have died. The rest, however, thrived, and were often seen by the then tenants, two brothers of the name of Marcus, who never disturbed them during their tenancy, which ended about 1884. These hares turned white in winter. In the Sagas it is related that during the twelfth century Earl Harold went to Gairsay to hunt hares.

*Lepus cuniculus*, *L.* Rabbit.

Orc. = *Cuning* (B. and H.).

As early as 1693 Wallace talks of "Rabbets" as being abundant in many of the islands.—(*Description of Orkney*, pp. 12, 13.) Low, in 1774, mentions them as especially common in Burray, but adds that "the profit made by the flesh and skins of these is by no means compensated by the damage they do in boring the sandy grounds and subjecting them to blowing."

Shirreff, in his work,<sup>1</sup> informs us that, in 1779, 36,000 rabbit-skins were shipped from Stromness. In Burray, a Captain Sutherland had a rabbit-warren, and the Rabbits were allowed free access to a field of turnips, as that gentleman found that the roots never rotted from being broken by those animals, nor did what remained prove less useful to his cattle.

The following may prove of interest as showing what a regular article of export these rabbit-skins were:—

In 1801, 9076 skins were exported; in 1802, 621 only; in 1803, 13,848; in 1804, 13,842; in 1805, 9744; in 1819, 25,980; and in 1820, 25,080.

Messrs. Baikie and Heddle, writing in 1848, also mention that Rabbits are found in most of the islands, "existing in thousands" in Sanday and Burray. These authors also make mention of a "considerable trade" done in rabbit-skins, but that the value of these so decreased as to be at last almost unremunerative. At the present time the only island we know of entirely given up to them is Eynhallow, where, in 1883,

<sup>1</sup> *General View of the Agriculture of the Orkney Islands*, 1814.

they were extremely abundant. They are well kept down in Rousay by the principal farmers there, but at one time the west side of the island was overrun with them.

Referring to Rousay, Mr. Moodie-Heddle tells us that when he first remembered the island there were no wild grey Rabbits to be seen, but the hill behind Westness was full of holes made by escaped tame ones of various colours. At the time Buckley was there he saw nothing but the common grey ones.

At the present time, Rabbits exist in every island of any size, but nowhere (except, as said before, in Eynhallow) in large numbers.

### DOMESTIC MAMMALS.

Of these we have very few notes, and there is little to be said about them. The old native breeds have been improved almost out of existence, though a few sheep still remain in one or two places.

Being so well supplied with sea communication, Orkney is now as well farmed, and has as good stock, as any part of Scotland; and by this time farmers know exactly what is best adapted to the climate, both as regards live-stock and seeds and roots, etc.

Shirreff mentions a curious sort of horse-sickness as existing in Eday, and he states that a Mr. Murray of Greentoft lost seventy-two horses by this disease alone in twelve years.

The native Sheep (*Ovis aries*) still exists on some of the islands, though now much reduced in numbers from the importation of the better breeds. In N. Ronaldsay there are a good many of this native stock, and these have to feed themselves almost exclusively on seaweed, a wall going round the whole island to keep them out of the cultivated ground. They are of all colours—white, brown, black, and speckled, the white and the brown predominating. For a short time during the lambing season, the ewes are admitted to graze on parts of the island.

We think the following note on Pigs, given us by Mr. Heddle, will be of some interest:—

“In Orkney, more especially in Hoy, large herds of swine were kept on the hills some fifty years or more ago, and this was probably a custom of very ancient date. They were kept out all spring and

summer, being killed off in the autumn for winter use. They were kept off from the arable ground by hill dykes made of turf, which were at that time kept in good order. For shelter there were houses built of turfs, and at the entrance two stones for the pigs to go between and rub themselves, as otherwise they would have rubbed themselves against the turf walls, and knocked them down. Their colours were brown and black—probably the two commonest varieties—and black and white. There were strict local laws that the pigs kept over the winter for stock should be ringed before being allowed down to the arable ground, so as not to unduly root it up. In those days there was no grass laid down or any root crops in the island.”

“The old Orkney race is now extinct, or merged in improved breeds; it had high shoulders and a long snout. The Chinese pig was imported here *direct* for crossing.”

Neill, in his *Tour*, refers to swine seen going about on the Hoy hills half wild.



## Class 2. AVES.

### Sub-class *AVES CARINATÆ*.

#### Series *ÆGITHOGNATHÆ*.

#### Order 1. **PASSERES.**

##### Sub-order *OSCINES*.

#### Section 1. *OSCINES DENTIROSTRES*.

##### Family **TURDIDÆ**.

##### Sub-family *TURDINÆ*.

#### **Turdus viscivorus, L. Missel-Thrush.**

In a MS. note in a copy of Baikie and Heddle made by R. Heddle, one of the authors, it is stated that "the Missel-Thrush has bred for two years in the garden at Westness" (island of Rousay). This would be between 1845 and 1856. Buckley saw nothing of the bird there in 1883.

The Missel-Thrush is apparently a very rare visitor to the Orkneys, and most of our correspondents pass the bird over in silence. Indeed, Mr. Moodie-Heddle tells us that neither in his father's nor his own time has the bird been seen at Melsetter.

Mr. T. W. Ranken, however, has found this bird breeding in Kirkwall, and writes us as follows:—

"I first noticed this bird in the garden here on the 4th of May 1874; later in the month it was joined by another, and they bred in the garden, and succeeded in rearing three young

birds, the nest being placed in the bough of a sycamore about 12 feet high. I believe this is the first and only recorded instance of this bird nesting in Orkney. I have observed this bird singly on several occasions, but never saw their nest here again."

Mr. Spence says that in 1875 a pair of Missel-Thrushes built their nest and reared their young at East Bank, near Kirkwall.

The first Missel-Thrush ever seen by Mr. Gilmour on the Pentland Skerries was on April 1st, 1888. Another was seen by him on March 20th, 1889, and Mr. Gilmour adds this note: "Very rare; only once or twice I have seen it before."

### *Turdus musicus*, L. Song-Thrush.

Orc. = *Mavi*.

Low mentions this species as common, and resident in Hoy and the Mainland, breeding in both islands.

We have notes of the Thrush as being a common bird in most of the larger islands from all our correspondents; and we ourselves found it in Hoy and the Mainland, but saw none in the Westray group, Sanday or N. Ronaldsay. Mr. Harvey, however, records it as breeding in the former of the two last-named islands.

From observations we made in Rousay the Thrush seems mostly to leave that island in the winter; and Mr. Irvine-Fortescue noticed that during a heavy snow-fall in the winter of 1886, Thrushes deserted the locality of Swanbister, and went down to the shore.

Thrushes breed in S. Ronaldsay, though they are much rarer there than Blackbirds. Mr. Reid, St. Margaret's Hope, informed us of a nest of young birds, in a garden near there, in 1889. We also saw Thrushes in the plantation of Muddiesdale, near Kirkwall, the same year.

On December 8th, 1889, Mr. Monteith-Ogilvy saw a Thrush on the garden wall of Holland House, Papa Westray, and says it is the only one he saw there.

**Turdus iliacus, L. Redwing.**

A regular autumn migrant, arriving in greater or lesser numbers every year.

Mr. Moodie-Heddle informs us that in Hoy the Redwing is more numerous than the Fieldfare; he also adds that it is frequently seen there in July, and that from some notes by his father and the late Mr. Traill of Woodwick, "it would appear that this bird undoubtedly bred in Rousay in 1863."

Mr. T. W. Ranken also sends us a note of a nest taken in the Palace Garden, Kirkwall, which he supposed to belong to this species, and gives full particulars. As, however, the bird was not obtained, this must still remain doubtful for the present.

We record these statements as they were given us, but it would have been more satisfactory had some of our correspondents sent us a specimen of a Redwing shot in summer, even although the nest was not forthcoming.

**Turdus pilaris, L. Fieldfare.**

A regular winter visitant to most of the islands, some remaining the whole winter through, though a good many doubtless go farther south.

Mr. Irvine-Fortescue considers that in his district they almost all pass on, and that there (Swanbister) they only remain for a few days at a time.

In the winter of 1875-6 immense flocks of Fieldfares were seen in Orkney, and Mr. Watt of Skail, *à propos* of this, says of both this and the Redwing:—"Used to appear in large flocks about autumn, but I have not seen any in this district since 1875-6."

Mr. Harvey says they arrive in Sanday in October, and are sometimes seen in April.

Mr. T. W. Ranken says that Fieldfares arrive about the middle of October, and that he has seen them as late as the 21st of April.

Mr. Moodie-Heddle tells us he has seen this species at Melsetter in July 1877, in June 1880, and June 24th, 1882.

These are extremely uncommon dates on which to see Fieldfares, and here the ordinary explanation of "Missel-Thrushes" will hardly avail, as these latter birds are so very rare in Orkney.

If these Fieldfares had not bred at, or near, Melsetter, their appearance at that time is quite abnormal.

We have since been informed that these birds showed no signs of breeding; there were some eighteen or twenty in the flock, and Mr. Moodie-Heddle is sure they were not Missel-Thrushes.

### *Turdus merula*, L. Blackbird.

Not rare in Low's time; resident the year round, and breeding in Hoy.

It seems, however, to have increased since then, from all accounts, which is likely, seeing how many small plantations, gardens, whin hedges, etc., have sprung up.

Thus Mr. Watt of Skaill, writing us in 1888, says:—"In 1863 there were only one or two couple in this parish, and these were carefully preserved, so they have increased in numbers, but not much, as I only know of six or seven pairs, but they are a nuisance in the gardens. A pair build every year in our old smithy, off the garden."

Mr. W. Reid informs us that Blackbirds were more numerous in 1865, in which year he found a nest in the Old Palace Garden, Kirkwall.

The Blackbird builds chiefly in the gardens in Sanday, as we are informed by Mr. Harvey and Mr. Denison. Buckley saw none in 1888 in N. Ronaldsay or the Westray group. He however saw a few in S. Ronaldsay in 1889, and was informed they bred there.

Here, as elsewhere, Blackbirds are migratory, and we have a note that on November 4th, 1830, and again on April 17th, 1837, great numbers were seen in Sanday.

Our experience in Rousay is to the effect that this species is much more numerous in winter than in summer, though to some extent this may be accounted for by the garden then acting as a gathering-ground for a good part of that island.



Mr. Monteith-Ogilvy informs us that he saw two pairs of Blackbirds about the garden of Holland House, Papa Westray, in the summer of 1889, but only one male in the winter.

### **Turdus torquatus, L. Ring-Ouzel.**

The Ring-Ouzel, since and during Baikie and Heddle's time, appears to have been a regular spring and autumn migrant, though by no means a common bird.

It seems to have bred in Hoy for the first time in 1847, and since then there has been a pair or two most seasons there, either in Berriedale or Segal.

According to Mr. Harvey, it is seen in Sanday during the month of April in pairs; but in N. Ronaldsay it is or was rare, as Dr. Traill of Woodwick, writing from that island, said that on May 6th, 1885, he observed a fine specimen of the Ring-Ouzel, which lingered in his neighbourhood for a few days, and then disappeared, and that this was the first specimen he had seen there.

Professor J. W. H. Traill of Aberdeen University saw a Ring-Ouzel in Lyradale, Harray, about 1865.

In Rousay, Buckley observed a pair in April 1883, but they did not stay to breed.

In 1888 Mr. Scarth told Buckley that he and his grieve saw a blackbird with a white ring round its neck in May of that year, at Binscarth.

Ring-Ouzels occur regularly, though not perhaps very abundantly, on spring migration at the Pentland Skerries. Mr. Gilmour has sent us several notices of their occurrence there at that time.

In an article in the *Scottish Naturalist* for October 1888, p. 344, Professor Traill of Aberdeen University criticises the statement in Howard Saunders' *Manual of British Birds*, "except the Orkneys and Shetlands, to which it (*i.e.* the Ring-Ouzel) is a comparatively rare visitor," thus:—

"In former years I was well acquainted with the birds of Orkney, more especially so with those of the parish of Harray on the Mainland (or Pomona . . . of geographers, but *not* of Orcadians). This parish is separated from the sea by hills

almost all round. . . . In one of the glens I once found a nest with four eggs, one of which I took, and still have in my possession as a proof that the bird does breed in Orkney."

Sub-family *CINCLINÆ*.

**Cinclus aquaticus, Bechst. Dipper.**

It seems strange that this bird, so common throughout Sutherland and Caithness, should be almost entirely absent in Orkney, as there are sufficient burns in some of the islands to enable a few to get a living. Whatever is the cause, we can at present put on record only one instance of its occurrence. A bird of this species was seen at Rackwick Burn, Hoy, by Mr. Arthur Dendy and Mr. Moodie-Heddle at the end of August 1883.

Sub-family *SAXICOLINÆ*.

**Saxicola œnanthe (L.). Common Wheatear.**

Orc. = *Stanechat*—*Chack*—*Chacko* (B. and H.).

A very common summer visitant to all the islands, sometimes breeding in Hoy at an elevation of between 1100 and 1200 feet. Buckley noticed that at Rousay they greatly frequented the stony beaches, probably attracted by the number of flies bred in the rotting sea-weed.

The prejudice against these birds, mentioned by Low, seems to have died out, at least we never met with any one who wantonly destroyed them, as seems to have been done in his time.

**Pratincola rubetra (L.). Whinchat.**

We have little to add to our information regarding this bird since Baikie and Heddle wrote. Mr. Moodie-Heddle tells us that Whinchats have bred for some years near Melsetter, and also in a valley near the burn of Berriedale,—both in Hoy. In the former place we saw a female on June 1st, 1888, the only occasion on which we observed the species in Orkney that year, but the season was intensely cold and stormy, and therefore very unsuitable for seeing the soft-billed summer migrants.

Although these birds occur sparingly on spring migration at the Pentland Skerries, yet they seem very local in Orkney, and again in 1889, the only one seen by us was at the same place as the one seen the previous year.

### *Pratincola rubicola* (L.). Stonechat.

Under "Stonechat" are probably included both this species and the Wheatear, and it is not easy to discriminate, for this reason, all the records of Stonechats sent us by our correspondents.

Mr. Moodie-Heddle informs us that a Stonechat was killed near Kirkwall in 1847, and that they are seen pretty often in Hoy, and may breed there.

Mr. Irvine-Fortescue saw a pair during several successive summers in Ramsdale, Orphir, where he was certain they bred, although unable to find the nest. They did not come to that locality in 1885, 1886, or 1887.

It is also said to have been seen in the summer of 1887, near Quanterness; and in July 1888 we saw a pair of old birds with their young in that locality, where they had evidently nested.

On April 5th, 1888, Mr. Moodie-Heddle wrote us that the Stonechats were about, but that he had not seen a Wheatear (at Melsetter).

Mr. Gilmour considers the Stonechat a very rare bird at the Pentland Skerries, the first he saw there being on April 5th, 1889: at first sight he took them to be Whinchats, but the white collar identified them. Writing us in 1890, Mr. Irvine-Fortescue says that in 1889 he saw several pairs and family parties, and that they seem to be more numerous than formerly. In that year he saw them in Lyrava Bay in Hoy: also at Linnadale and Naversdale in Orphir, in all of which places they appeared to be breeding.

### *Ruticilla phœnicurus* (L.). Redstart.

This elsewhere rapidly increasing species has not as yet become more frequent in Orkney than when Baikie and Heddle wrote. Our excellent correspondent, Mr. Moodie-Heddle, passes the

bird over in silence, though we may expect when it does spread to these islands, that Hoy will be the first place where it will be found breeding.

We can at present add but very few instances of its occurrence to that already recorded, viz., one shot by Mr. W. Reid at Highland Park, Kirkwall, in 1852.

In another instance Mr. Millais saw a male sitting on a turf bank about two miles from Kirkwall, on the Stromness road, on April 20th, 1887; he was driving at the time, and the bird allowed the trap to come within a yard or two of it.

Mr. Gilmour has since reported to us several instances of this species being seen at the Pentland Skerries. On May 1st, 1888, he saw a male and female, along with Ring-Ouzels, Field-fares, Chaffinches, Whinchats, and one Snow Bunting, a curious collection of summer and winter visitors.

On the 17th Redstarts were numerous, there being more females than males. This, Mr. Gilmour adds, was a great migration day.

Again, on May 10th, 1889, Mr. Gilmour saw a Redstart at the same place.

Mr. Ranken sent us another specimen, a female apparently, which had been picked up dead near the little ness at Gleitness, near the end of October 1889. Unfortunately the bird was too much decomposed for preservation, and from its emaciated appearance seemed to have been starved to death.

### *Ruticilla titys* (Scop.). Black Redstart.

On the 20th of December 1859, Mr. W. Reid shot a specimen of this bird at Kirkwall, and in answer to some inquiries, sent us the following particulars:—

“The Black Redstart which I shot at Kirkwall was a male, in fine plumage. There was snow on the ground at the time. I was returning to town, having been out after hares, and had one of the barrels of the gun loaded, when I saw the little bird clinging to the north gable of the Earl’s Palace, as if hunting for the eggs and larvæ of insects, as I thought. It moved



from place to place, still clinging to the wall, when I shot it. Mr. Ranken and Dr. Duguid identified it. I took the little bird and a very fine specimen of the Waxwing to Wick with me in 1866. I took over to H. Osborne the two birds, and he has no doubt as to the Redstart being the black one. I had previously shot the common Redstart in 1852. What happened to the specimen was this: the cat one day, supposing it was something to eat, got hold of it and so destroyed it, that it was no longer fit as a specimen." (W. Reid, *in lit.* 11/4/88.)

We have alluded in a former work to the occurrence of the Black Redstart in the Pentland Skerries.<sup>1</sup> Since then Mr. Gilmour has sent us a note of another seen by him there, on April 24, 1889.

Sub-family SYLVIINÆ.

*Erithacus rubecula* (L.). Redbreast.

Orc. = *Robin*. (B. and H.)

Resident in Low's time, and now breeds on several of the islands, as Hoy, Rousay, and the Mainland, though in the latter it appears more local.

Mr. Ranken states that, though his father did not appear to have seen many about Kirkwall, it has now become common and indigenous there, and a pair generally nest in his garden.

Mr. Irvine-Fortescue considers it rare at Swanbister, and that it is not such a confiding bird in Orkney as farther south. A pair seem to have bred there in 1889, as a young one was frequently seen.

Mr. W. Watt says they are rarely to be seen at Skail, and then only a chance one, when frost and snow continue severe for longer than usual.

At Sanday it appears only on migration in October, and Mr. Harvey says that it cannot live there in winter, though he adds in another note that on the 28th of January 1888 he saw two or three Robins in his garden.

In 1883, Buckley found it common and resident in Rousay,

<sup>1</sup> *Fauna of Sutherland, Caithness, and West Cromarty*, p. 107.

and noticed that their numbers from April to December continued steady.

Writing in January 1888, Mr. Moodie-Heddle says that Robins are not nearly so numerous in Orkney as formerly; a severe frost some ten years ago killed them in great numbers.

In Walls and Hoy, Robins are three times as numerous in the months after September as in summer.

The only place where we saw the Redbreast in 1888 was at Binscarth; they certainly were not as numerous as usual that season.

In April 1889 there seems to have been a perfect "rush" of Redbreasts at the Pentland Skerries; Mr. Gilmour never remembers to have seen so many.

### *Sylvia rufa* (Bodd.). Whitethroat.

Gray says that the Whitethroat appears to have occurred once or twice in Orkney and Shetland. We have no record from any of our correspondents of this bird in the first-mentioned group, and Gray gives nothing more than the bald statement. Morris says that one was shot on Sanday, by the late Mr. Strang, on May 25th, 1850.

### *Sylvia atricapilla* (L.). Blackcap.

Since Baikie and Heddle wrote, several more specimens have been recorded from Orkney, and from two correspondents we have had notes as to their breeding near Kirkwall in two successive years.

Mr. T. W. Ranken's father heard one singing in his garden on June 17, 1825, and the same gentleman saw one which had been shot in Sanday on 22d of March of the same year. Three are recorded from Melsetter; one was found dead in 1867, another was shot 1st October 1868, after an easterly gale, and a third was killed in 1872.

As regards the occurrence of the Blackcap during the breeding season, Mr. T. W. Ranken writes us:—

"A pair of Blackcaps were frequently seen at Grainbank this summer (1886). I heard the male sing on several

occasions. The nest with eggs was found, but was taken by some boys from Kirkwall."

Mr. Cowan sends us notes which probably refer to the same birds, but adds that they nested in 1887 as well.

Mr. Harvey tells us the Blackcap is seen in Sanday about April, for a week or two.

We heard so many accounts of the occurrence of this species near Kirkwall, during our visit in 1888, and of its breeding there, that we were most anxious to see it for ourselves, and place the matter beyond a doubt. On inquiry, however, we found that, probably owing to the cold backward season, the birds had not stayed that year. Both the localities given, viz., Muddiesdale and Grainbank, are close to Kirkwall.

We have given all the above information as we got it, and it must be taken for what it is worth. We ourselves have very little faith in the bird ever having bred in the islands, and March and April are very unusual dates for such a bird to be seen anywhere in the north, October being the most usual month when it does put in an appearance. Probably some other bird with a black head has been taken for it.

### *Sylvia salicaria* (L.). Garden Warbler.

[*Obs.*—Mr. Moodie-Heddle says he has a note of a Garden Warbler killed at Melsetter in 1868, weight 5 drs.  $1\frac{1}{2}$  scr.; we prefer, however, to keep this species in brackets until further confirmation.]

### Sub-family *PHYLLOSCOPINÆ*.

### *Regulus cristatus*, Koch. Golden-crested Wren.

A common autumn and winter visitant to most, if not all the islands, but Mr. Moodie-Heddle says it has not been so common of late years.

Both the late Mr. J. G. Heddle and the late Mr. Ranken

record it as having bred in Orkney: in the first instance in the garden of Mr. Traill of Woodwick, about the year 1830.

In the second case Mr. Ranken's father said that he only once saw its nest in his garden. The nest was attached beneath the branch of a sycamore, but he failed to find it until after the young had evidently been hatched and flown. We may add that a sycamore is not a usual tree for this bird to nest in.

*Regulus ignicapillus* (C. L. Brehm.). Fire-crested Wren.

[Obs.—Mr. Moodie-Heddle informs us that this species has occurred several times along with the preceding, after gales. This, however, requires further confirmation.]

*Phylloscopus collybita* (Vieill.). Chiffchaff.

[Obs. Baikie and Heddle say that the Chiffchaff occasionally visits Orkney in summer, but is not known to breed.

Gray says that in a MS. note in Baikie and Heddle's work there is mention of the occurrence of a single specimen in Orkney in 1850.

Seeing how scarce, if not entirely absent, this species is in the northern counties of Scotland and the Outer Hebrides, we prefer to include it in brackets until we have further and more accurate information of its occurrence in our district.]

*Phylloscopus trochilus* (L.). Willow Wren.

Common as this warbler is throughout the north of Scotland, it seemed, from the accounts we received, to be quite rare in Orkney.

Mr. W. Reid says he has shot it, and Mr. Cowan adds that it is an occasional visitant. Mr. Irvine-Fortescue heard and saw it on one occasion at Swanbister, on May 14th, 1887, and adds that this is the only occasion on which he did so.



Mr. Moodie-Heddle says that a small warbler visits Melsetter, and from his description of its nest, it is most probably the Willow Wren, though we saw nothing of it there ourselves in 1888.

At Binscarth, however, some six or seven miles from Kirkwall, we saw and heard several Willow Wrens in that year; indeed they appeared quite common: of course this *may* have been their first appearance there, though more likely it had never been recognised.

Sub-family *ACROCEPHALINÆ*.

*Acrocephalus phragmitis* (Bechst.). Sedge Warbler.

The first instance of the occurrence of this bird in Orkney seems to have been in 1857, when the late Mr. Ranken obtained one on July 29th.

Since then the species has become much commoner, and Mr. T. W. Ranken says it has been frequently seen and heard at Muddiesdale; and Buckley, when in Rousay in 1883, considered that there were about three pairs in the Westness garden.

Mr. Irvine-Fortescue sends us notes on the occurrence of the Sedge Warbler at Swanbister. Prior to 1881 he had never seen or heard this bird in Orkney, but in that year he heard it in some bushes near his house on May 2d, and, although the birds remained all through that summer and again during the two following ones, it was not until June 27th, 1884, that he found the nest with young. Since then they have come regularly every year and bred there.

In 1886 a pair came to Grainbank for the first time, so that it would appear that the species is still spreading.

We found the Sedge Warbler fairly common at Melsetter in Hoy, at least three pairs in 1888; and Mr. Moodie-Heddle informed us they had bred them for over twenty years.

Family **ACCENTORIDÆ.****Accentor modularis (L.). Hedge-Sparrow.**

The Hedge-sparrow seems to have increased, both as a migrant and as a breeding species, since Baikie and Heddle's time.

Mr. W. Reid mentions his shooting one as a rare occurrence, even as late as 1862, so that the increase must have commenced at least as late as that date.

Writing in 1887, Mr. Moodie-Heddle says:—"This bird is now more common, and breeds most seasons at Melsetter, either in the lower parts of the hedge, or in apple-trees against a wall."

Mr. T. W. Ranken sends us the following notes on this species by his father and himself:—

"I have seen two in Kirkwall, one in 1842, and another in 1844. Another was shot by Dr. Duguid, near Kirkwall, in April 1849 (B. M. R.). These birds are more frequently seen now, 1887, and a few nests may be found in a season. The hedges at Wideford are the best locality to find specimens, but they are by no means common in Orkney."

Buckley shot a specimen in the Westness garden, Rousay, in the autumn of 1883, but they did not breed there at that time.

Mr. Moodie-Heddle sent us a specimen shot at Melsetter in April 1888, and a pair bred there in May; but the young perished in the nest from cold.

Family **PARIDÆ.****Parus major, L. Great Titmouse.**

The following is the only notice we have of the occurrence of the Great Tit in Orkney.

Mr. T. W. Ranken says:—"2d July 1884. I frequently got quite close to a specimen of this bird in the plantation of Muddiesdale to-day, once being so near to it that I was almost within arm's-length, and have no hesitation in stating that this straggler was certainly identified. I have never seen another here."

*Parus cæruleus*, *L.* Blue Titmouse.

We have very few records of this species in Orkney since the one given by Messrs. Baikie and Heddle.

Mr. Ranken saw the bird referred to by those authors, but, being afraid of blowing it to pieces, fired too long a shot and missed it.

Since the foregoing was written, however, the son of the above-named gentleman, Mr. T. W. Ranken, saw a Blue Tit at Kirkwall on the 20th of May 1888. Mr. Millais also informs us that in April 1887 he saw a Blue Tit at Stromness, in which place he had once before met with the species, though he has forgotten the precise date.

Family **CERTHIIDÆ**.*Certhia familiaris*, *L.* Common Creeper.

Although Baikie and Heddle include the Creeper in their list, they give no actual instance of its occurrence, only the bare statement that it has been occasionally shot in Orkney.

Mr. Moodie-Heddle says that one was shot near Stromness in 1841, and Mr. T. W. Ranken says:—"I have seen this bird in the garden here on two different occasions; the last time in the month of June 1884, the bird passed behind the trunk of a tree within two yards of where I was sitting."

Want of trees is naturally not conducive to the spread of such an arboreal species in Orkney, and the difficulty of getting up plantations would prevent its increase.

Family **TROGLODYTIDÆ**.*Troglodytes parvulus*, *Koch.* Wren.

Orc.: pronounced like *Wirann*. (J. G. M.-H.)

Seems to be fairly common and resident in many of the islands, breeding in bushes when such are obtainable, at other times in long heather, by the sides of burns, etc.

Mr. Watt, of Skaill, considers it by no means a common bird on the west side of the Mainland.

Mr. Traill, of Woodwick, informed Mr. Spence that considerable numbers visited N. Ronaldsay during easterly winds in the winter of 1880-81.

Mr. Moodie-Heddle sends us the following notes :—

“ Usually builds among heather roots, under banks of burns, and in bushes about streams, and in gardens. Should the wind shift and blow coldly on the place where they are making a nest in a bush, they will leave it and begin another, even though the first is about completed. The young are very tender, and hard to rear, if removed from the nest. A Wren built in a basket hanging to the roof of a tool-house at Melsetter, 1875, and the first hatch was twelve young ones, the next (of the same season) ten young ones, and there was one egg found in the nest after the last hatch had flown.

“ The bird was not only tame, but became so bold, that she would peck my fingers when I put them to the hole in the side of the nest.”

In Rousay, Buckley found a Wren's nest in an elder-tree, about 12 ft. from the ground, an unusual height for this bird to build.

Mr. Millais has examined the Orcadian Wren and finds it is much more strongly barred than the English form, though perhaps not quite so much so as that from St. Kilda. Harvie-Brown and Eagle Clarke noticed that the Wren seen by them in Papa Westray, in 1890, appeared to be light in colour and very large.

#### Family **MOTACILLIDÆ.**

##### **Motacilla lugubris, Temm.** Pied Wagtail.

The habits of this species must have changed much since Low's time, when he considered it migratory, never being seen after May. It is now resident the year round, breeding in some of the larger islands, though less numerous in the winter.

In Rousay great numbers are seen in August and September, but they get scarcer after that time.



In 1888 we saw the Wagtail in several localities on the Mainland, but nowhere abundant, nor did we meet with it at all in the North Isles, although Mr. Harvey records it from Sanday, and as breeding there.

*Motacilla melanope*, *Pall.* Grey Wagtail.

It is more than probable that this species has to do duty for the Yellow Wagtail in Orkney, in most instances, as well as in many parts of the north of Scotland.

Both Mr. Ranken and Mr. Watt seem to have met with this species, though only on very rare occasions; but Mr. Harvey notes it as resident and breeding in Sanday.

Mr. Moodie-Heddle mentions that it breeds occasionally in Hoy, and that both it and the Yellow Wagtail are shyer in the breeding season than the Pied Wagtail, or at least are not so much seen.

*Motacilla raii*, *Bp.* Yellow Wagtail.

Although mentioned by Baikie and Heddle as having been observed several times, in a note written by the latter he says:—"There is some confusion between these species," *i.e.* the Yellow and Grey Wagtails. The one mentioned in these authors' book as having been killed by Mr. Ranken, was shot on the 19th of November 1845, and this date alone seems to point to its being the Grey species.

Mr. Reid mentions having shot one at Wideford, in September 1858, but here again a doubt would seem to exist, as the word "yellow" is often applied to the common (in the north) "melanope," and none of these specimens are now available for examination.

Mr. Moodie-Heddle says also, that confusion exists in Orkney between the Grey and Yellow Wagtails: he adds, however, that the latter bred at Melsetter in 1880 and 1881, and probably at other times. He sent the eggs up to the editor of the *Field*, who identified them as those of the Yellow Wagtail.

**Motacilla viridis, Gmel. Grey-headed Wagtail.**

A bird of this species was shot by Mr. Gilmour, the light-keeper of the Pentland Skerries, on May 19, 1888, and the legs and wings sent to Harvie-Brown for identification. Mr. Gilmour described it as a wagtail with a blue head, a little white on the chin, and bright yellow underneath. The wind was south-east at the time, and the weather hazy. Another was seen at the same place and by the same person, on May 3, 1889, the wind and weather also being the same.

**Anthus pratensis (L.). Meadow Pipit.**

Orc. = *Teeting*.

It seems strange that Low should mention this species as common, and leave out the Rock Pipit entirely from his list; he seems, however, to have confused the two species, as he asserts that the Meadow Pipit comes to the shore in the winter, and retires to the hills in summer to breed.

We found the Titlark less common, perhaps, in Orkney than in other parts of Scotland, though fairly numerous in the South Isles, and it is resident.

Salmon mentions the Titlark in his Diary (1831) as occurring in Sanday, but says nothing about the Rock Pipit, which is generally abundant, so perhaps he confounded the two species. We saw no Meadow Pipits there in 1888, though we observed them in the south end of Stronsay.

Mr. Monteith-Ogilvy informs us that in 1889 he found this species numerous in Papa Westray: we saw none there, nor in Westray, in 1888.

**Anthus trivialis (L.). Tree Pipit.**

We are indebted to Mr. T. W. Ranken for the only notice we have of this bird in Orkney. He writes as follows:—

“This bird I have seen in the garden here on more than one occasion, sitting on the topmost branch of the taller sycamores, ascending every few minutes to a height of about thirty feet,

returning again to the same spot, the descent being slow, the wings and tail expanded, the flight in graceful circles, singing all the time until it reached the starting-point. The middle of June is the time of year I have observed the bird."

From this description there would appear no doubt of the correct identification of the species.

### *Anthus obscurus* (*Lath.*). Rock Pipit.

Orc. = *Tang Sparrow*.

A very common and characteristic Orkney species, being abundant everywhere along the coast, and in all the small holms, and often seen sitting on the houses in Kirkwall, or on the rigging of vessels in the harbour. They are constantly observed resting on a species of sea-weed, which grows just below high-water mark, and from this habit, Mr. Irvine-Fortescue tells us this weed has acquired the trivial name "Teeting-tang"; he adds that this weed is, or was, occasionally given as food to pigs.

The Rock Pipit breeds amongst the stones on the top of the cliffs, in small holes, and even amongst nettles; we found one on Egilsay in this latter situation.

On May 27th, 1888, we found a young Rock Pipit, not long out of the nest, flying about some low rocks to the west of Kirkwall; this seems a very early date.

### Family LANIIDÆ.

#### *Lanius excubitor*, *L.* Great Grey Shrike.

Low, in his *Fauna*, remarks that he never knew of any of the "butcher kind" in Orkney.

Since Messrs. Baikie and Heddle wrote, many more specimens of the Great Grey Shrike have been obtained in Orkney.

Mr. T. W. Ranken's father saw one which had been shot at the Head of Holland, near Kirkwall, in the summer (?) of 1845;

he also mentions that two were shot near Kirkwall by Mr. W. Reid and the late Dr. Duguid, in April 1849.

Mr. W. Reid shot two in one day at Wideford, in October 1884, after an easterly gale.

We have many other instances of the capture of this species in Orkney, which it is scarcely necessary for us to enumerate here; we have particularly mentioned the above, as April and "summer" are not the most usual seasons for this species to occur.

### *Lanius collurio*, L. Red-backed Shrike.

On May 19th, 1888, Mr. Gilmour, the light-keeper at the Pentland Skerries, shot a bird of this species, and sent the wings and legs to Harvie-Brown for identification. This is the first recorded instance of the Red-backed Shrike in Orkney.

In July of the same year Mr. Moodie-Heddle informed us that he saw a bird at Hoy, which he was inclined to refer to the Pine Grosbeak, sitting on a wall near the house, but, from his description of its colouring, beak, and mode of flight, it seems much more probable that it was a Red-backed Shrike. The bill was described as having the upper mandible projecting over the lower, and as being toothed, and its flight was a series of jerks, or dashes, with a drop at the end of each: the note was like that of a Twite, but much louder and coarser.

### Family **AMPELIDÆ**.

### *Ampelis garrulus*, L. Waxwing.

Of this bird Mr. Moodie-Heddle says that two specimens were killed in Orkney in March 1851, but gives no further particulars.

Mr. Reid says that one in his possession was found dead at Caldale, near Kirkwall, in 1852, and that another was shot the same year at Stronsay. Mr. Reid also adds that he has shot this bird himself.

Mr. W. D. Baikie informed Mr. Ranken that he shot a Waxwing out of a flock of five, which were in company with some Starlings, near the hill of Tankerness, in the autumn of 1864.



Family **MUSCICAPIDÆ.****Muscicapa grisola, L. Spotted Flycatcher.**

A very rare species in Orkney, and we have received but few notices of its occurrence of late years.

Mr. T. W. Ranken has observed this bird on several occasions feeding in his garden at Kirkwall, and generally succeeded in getting near enough to identify the species.

Mr. Moodie-Heddle tells us that the Spotted Flycatcher bred at Melsetter in 1867, and during several years since then.

Mr. Spence observed the bird thrice in Orkney in 1882, on every occasion on the Mainland.

Mr. Harvey of Sanday gives April as the time when the Spotted, as well as the Pied Flycatcher occur in that island.

Mr. Gilmour informs us that Spotted Flycatchers were numerous at Pentland Skerries on May 17th, 1888.

We ourselves have never seen this bird, even in Rousay, a most likely locality.

**Muscicapa atricapilla, L. Pied Flycatcher.**

Numerous instances of the occurrence of this species in Orkney are given by Messrs. Baikie and Heddle, and, since the date of their work, many more have come to our knowledge. Most of these have occurred in either May or October, the two great months of migration.

It would be superfluous for us to give every occurrence known to us. We merely give those that seem to have any special interest attached to them.

Dr. Traill of Woodwick informed Mr. Spence that, during a continuance of easterly wind in the winter of 1880-81, considerable numbers visited N. Ronaldsay.

Mr. T. W. Ranken informs us that on May 3d, 1885, he saw a pair flitting about the garden of the National Bank house. They frequently came within a few feet of him. The night was very cold, and they seemed to have difficulty in obtaining food.

Mr. Moodie-Heddle sends us a note that the Pied Flycatcher bred at Melsetter in 1864.

## Section 2. OSCINES LATIROSTRES.

## Family HIRUNDINIDÆ.

*Hirundo rustica*, L. Swallow.

Low mentions Swallows at p. 25 of his *Tour* as building at Stowse Head in S. Ronaldsay, every year in numbers, as well as in Kirkwall, and, as he also mentions Martins and Sand Martins as breeding at the same place, he must have been sure of his point.

Barry, probably quoting from Low's *Fauna Orcadensis*, mentions Swallows as building in the chimneys of houses in Kirkwall, but Dunn makes no mention of them.

Mr. Moodie-Heddle says that Swallows have become more frequent in Hoy of late years, and that they breed there.

Mr. T. W. Ranken says he has noticed Swallows at Kirkwall almost annually for the last ten years, and that a pair built under the eaves of his house in the summer of 1876.

Mr. Irvine-Fortescue has seen this bird either at Kirkwall or Swanbister on different occasions since 1878, more frequently of late years, but even yet not common.

Buckley saw Swallows at Rousay on two occasions only in 1883, but was told that they had once bred there.

Mr. Harvey says that the Chimney Swallow comes to Sanday in June, and breeds about the chimneys and the eaves of houses. There is a specimen in Mr. Denison's collection. Buckley saw a pair of Swallows hawking about the shores of Hoy, not far from Melsetter, on May 30th, 1888, and another, perhaps one of the same pair, near the same place, a few days later.

From the foregoing remarks it would appear that Swallows, although once fairly numerous in parts of Orkney, became very scarce, and are only now again increasing.

*Chelidon urbica* (L.). Martin.

As before mentioned, under the preceding species, Low found Martins breeding at Stowse Head in S. Ronaldsay; but in

his *Fauna* he gives the Cathedral at Kirkwall as the only locality. Barry says that in his time they bred in the windows of the latter place.

Although Mr. Watt informs us that the Swallow bred at Skaill House, the bird he refers to is more likely to have been the Martin: he informs us that "they are rather uncommon, and only occasional visitors. Many years ago, a pair nested under the south window-sash of Skaill House. Last summer (1887) a pair were to be seen flying round the house; these, after a short time, left, and did not appear again."

Mr. Cowan informs us that a few birds nested in Bugar, near Evie; but there were none there in 1888. Mr. Ranken says he has seen this species more often in Orkney than the Swallow, sometimes in small flocks, and that a few pairs build in Kirkwall. The late Mr. J. G. Heddle remarked that they were formerly found at Melsetter, as if this was not the case at the time he made this note, but his son, Mr. Moodie-Heddle, says (1887) that they have become more frequent of late years, and breed (*i.e.* in Hoy).

None were seen in Rousay by Buckley in 1883.

Writing from N. Ronaldsay, Dr. W. Traill of Woodwick informed Mr Irvine-Fortescue that, on May 31st, 1885, he saw a flock of House-Martins, consisting of between two and three dozen individuals, flying backwards and forwards over a mass of decaying seaweed, probably attracted by the flies bred therein. Generally, the Martin is a rare species in that island, a pair or a stray bird being only generally seen, and that usually after an easterly gale.

Mr. Irvine-Fortescue says they are rare at Swanbister. He informs us that they formerly nested in the old manse of Birsay, and that he saw the birds and nests some twenty years ago or more. About ten years after the house was white-limed, when they ceased to nest there.

When in Orkney in 1888, we found the House-Martin the commonest of all the species. We saw some at Melsetter, and at Rackwick and Little Rackwick, in Hoy; at the two latter places hawking along the sea-cliffs. Several were seen flying about the Cathedral on the 9th of June.

A pair of House-Martins used to breed in a house in St. Margaret's Hope, S. Ronaldsay, but there were none there in 1889, nor did we see any in Hoy that year, though one was observed by Miss Heddle at Melsetter.

Thus, from what we have related, it would appear that, like the swallows, Martins fluctuate both as regards their breeding areas and also their visits on migration.

### *Cotile riparia* (L.). Sand-Martin.

Orc. = *Witchuck* (Low only).

Although recorded as a visitant and as breeding in Orkney since the time of Low, it is curious to find, both from Messrs. Baikie and Heddle, and also from one or two correspondents, that, like the other members of the *Hirundinidæ*, Sand-Martins are irregular in their visits in different years.

From Mr. Watt we learn that they no longer breed at Skaill, a locality given by Low, and Baikie and Heddle, nor has he seen the bird in Orkney.

Both Mr. T. W. Ranken and Mr. Irvine-Fortescue have seen the bird, though not in great numbers, and the former tells us it breeds in the sandy rabbit-warrens.

Mr. Harvey informs us that Sand-Martins breed in Sanday in holes in the beach and links, though we saw none there in 1888. It was in Sanday that Salmon met with this bird, in 1831, and it was the only species of *Hirundo* seen by him on his Orkney tour.

Buckley saw some about the Loch of Wasbister in Rousay in 1883, but on asking his attendant what they were, he said he did not know the bird, so that they were evidently uncommon there at that time, nor could he discover any breeding-place.

In a later letter Mr. Moodie-Heddle says that the Sand-Martin is much scarcer than formerly, perhaps owing to the increase of brown rats—so much so that the younger people hardly know the bird; it used to breed near Melsetter in his father's time.



## Section 3. OSCINES CONIROSTRES.

## Family FRINGILLIDÆ.

## Sub-family FRINGILLINÆ.

*Carduelis elegans*, *Steph.* Goldfinch.

As is the case all through the north, the Goldfinch is an extremely rare bird, but whereas in parts of the northern mainland of Scotland the bird was at one time almost common, such never seems to have been the case in Orkney.

Mr. Cowan says, "not seen by him, but known to be here." The only positive instance of its occurrence seems to be that of one that was shot near Kirkwall by Hubbard in 1858, as a note by the late Mr. J. G. Heddle informs us.

*Chrysomitris spinus* (L.). Siskin.

[*Obs.*—Like the preceding, the Siskin seems to be extremely rare, if not of doubtful occurrence in the Orkneys, and the only specimen of which we have any actual record is a female which was brought to Mr. T. W. Ranken; it was in bad plumage, and had been caught by a boy. Mr. Ranken suspected that it had been turned out of, or escaped from, a cage, as it was quite tame, and for this reason we enter the species under an observation.]

*Ligurinus chloris* (L.). Greenfinch.

Orc. = *Green Linnet* (B. and H.).

This is a bird that has become a resident since Baikie and Heddle wrote, possibly on account of the increase of plantations. In their time it was only known as a winter visitant, as, indeed, seems to be the case in Sanday, and probably all the other islands in which no suitable breeding-place is to be found.

The Greenfinch now breeds commonly on the Mainland, and Mr. T. W. Ranken and Mr. Irvine-Fortescue have found

the nest on several occasions, but both these gentlemen agree that, if not formerly overlooked, it is only within the last few years that it has done so. Indeed, it seems to have been by no means common about Swanbister, and certainly did not breed there before 1879 or 1880.

At Westness, Rousay, there were three or four pairs in the summer of 1883 breeding in the garden, and Buckley took a nest there. He noticed great additions to their numbers in autumn, getting more numerous still in winter.

The Greenfinch breeds at Birstane, near Kirkwall, as Mr. Reid, of S. Ronaldsay, informs us, and we found a nest in the plantation of Muddiesdale, on the 25th of June 1889, containing five fresh eggs.

### *Passer domesticus* (L.). House-Sparrow.

Orc. = *Sparrow*.

Sparrows were abundant in Orkney even in Low's time, and this is the more singular, as there are yet places in the Highlands where the bird is either rare or altogether absent.

They occur abundantly through most of the islands, being very numerous in the garden of Westness, Rousay, building in the ivy on the walls there. Mr. Harvey tells us it is resident in Sanday and breeds in old ruined walls.

Mr. Watt of Skaill says they are very numerous there, and that there is one, almost white, that has been about his residence for the last two years [1888].

Mr. Moodie-Heddle sends us the following curious note :—"Near Swanbister, in the Mainland, from 1873 to 1879, and probably yet, almost every sparrow was more or less white. At Melsetter, two seasons ago, a pure white one was flying about all summer."

In 1888 we found Sparrows abundant in all the islands, except the uninhabited holms, and were much struck with the large size and brilliant plumage of those at Pierowal, Westray.<sup>1</sup>

<sup>1</sup> See also under Wren (p. 106).

**Passer montanus (L.). Tree-Sparrow.**

[*Obs.*—In reference to a question regarding a previous note sent us by Mr. Moodie-Heddle that most sparrows in Orkney (? Hoy) were Tree-, not House-, Sparrows, that gentleman writes us:—"I don't say this of my own knowledge, as I have not examined the point; but the late Dr. Traill, of Woodwick, and also a gentleman from near Manchester (I cannot recall his name) who came about eggs of Richardson's Skua more particularly, both said that the sparrows about Melsetter were nearly all Tree-Sparrows, after examining some."

All the sparrows seen by us in 1888 at Melsetter and elsewhere were the common House-Sparrow.]

**Fringilla cœlebs, L. Chaffinch.**

By no means a common bird *everywhere*, even in winter, and decidedly rare, *as yet*, in summer.

Mr. Ranken's father saw a pair in some willows at Papdale on May 24th, 1839; and again, on the 4th of July, a male in the shrubbery surrounding St. Magnus Cathedral, Kirkwall. The same gentleman also remarks that many were seen in Orkney during the season of 1845.

At the present time Mr. T. W. Ranken thinks they breed, though he has never actually seen a nest. Mr. Irvine-Fortescue informs us that he has Chaffinch's eggs, taken by Mr. Robert Spence in Kirkwall, but that, previous to the winter of 1887-88, he had only seen one Chaffinch, a male, at Swanbister. At the end of November 1887, and again in 1889, a small flock of both sexes appeared in the bushes about that place, and they remained all the winter, mixing with the Greenfinches and Common Buntings.

Buckley saw nothing of these birds in Rousay during the summer of 1883, though there were plenty of trees in the Westness garden. The first seen were on October 22d, and they got more numerous as the winter advanced.

Mr. Moodie-Heddle says that Chaffinches are now more

numerous in Hoy, and that some have bred since 1859 ; we, however, saw none there in 1888.

Mr. Reid of S. Ronaldsay informs us that he has taken several Chaffinches' nests at Muddiesdale, and we ourselves saw some birds there in June 1889, which were evidently breeding.

### *Fringilla montifringilla*, L. Brambling.

We have little to add to what Baikie and Heddle say of this bird.

Mr. T. W. Ranken says he thinks he has seen Bramblings, two or three at a time, in company with Snow Buntings, the two species separating when disturbed, but he never actually saw one dead in Orkney. Mr. Gilmour, the lighthouse-keeper on the Pentland Skerries, has seen birds there that he supposed to be Bramblings on one or two occasions. As he specially mentions that, when flying, the rump was white, it is most likely that his identification was correct. At page 98 of his *Birds of Shetland* Mr. Saxby says :—" I have ascertained that this species has also become more abundant in Orkney during the last ten or twelve years, but it has not yet been observed there in summer." No authority, however, is given for this statement.

### *Linota cannabina* (L.). Linnet.

Orc. = *Lintie*.

Common, and resident even in Low's time, receiving large additions to its numbers in winter : it breeds in many localities in the Mainland, and also in Rousay and Hoy. A male shot in Rousay in December still retained some of the pink feathers on its breast.

### *Linota linaria* (L.). Mealy Redpoll.

Mr. Moodie-Heddle informs us that he knew of a specimen of this bird, but that, from its great tameness, he imagined it to have been an "escape." Mr. T. W. Ranken also says he has seen the species occasionally, but does not consider it by any means common.



***Linota rufescens* (Vieill.). Lesser Redpoll.**Orc. = *Lintie*.

Probably confounded at times with the common linnet. Mr. Moodie-Heddle says it is only an occasional visitant to Hoy. Mr. T. W. Ranken says it is indigenous, though not plentiful, on the Mainland, breeding in bushes, *not* on the ground; while about Stromness, in May 1890, Mr. J. Young found Linnets, Redpolls, and Twites equally common.

Mr. W. Reid considers this bird only a visitor. Mr. Harvey says it breeds in Sanday, but this requires further confirmation, the only species we saw there in 1888 being the Twite, though it is extremely likely that the Common Linnet breeds there sparingly as well.

Mr. Gilmour noticed a Redpoll on the Pentland Skerries in March 1888.

***Linota flavirostris* (L.). Twite.**Orc. = *Heather Lintie*.

Abundant everywhere and at all seasons, breeding on the ground, amongst heather in most places, but taking kindly to trees,<sup>1</sup> bushes, and even ivy, where these are to be found.

We took nests in these latter situations in Rousay in the Westness garden, always using a glass to be sure as to the identity of the bird; indeed, we ourselves never happened to come across a nest in any other situation, though all our correspondents from other places give bunches of heather as the most usual site.

Mr. T. W. Ranken tells us he has found a Twite's nest in the shell of a decayed turnip.

Sub-family *LOXIINÆ*.***Pyrrhula europæa*, Vieill. Common Bullfinch.**

Since Baikie and Heddle wrote their book we can only hear of one other instance of the occurrence of the Bullfinch in Orkney.

Mr. W. Reid saw one at Butquoy, Kirkwall, in 1865.

<sup>1</sup> Twites also breed in currant bushes in the Outer Hebrides. (See *Fauna of the O. H.*, p. 63.)

*Loxia curvirostra*, L. Common Crossbill.

Since 1806 at least, flocks of Crossbills have visited the Orkneys, as we have notes of them from the Mainland, Hoy, and Sanday, Pentland Skerries, etc. At Melsetter they occurred plentifully in 1849, 1855, 1857, and 1866; three flocks of about twenty-five in each in 1868; and again in 1873.

Numbers were seen in the Bishop's Palace Gardens, Kirkwall, on July 21st, 1840.

Mr. T. W. Ranken told us that a pair of Crossbills built three times in the plantation of Muddiesdale in 1882; and on each occasion the nest was ruthlessly harried by egg-collectors. Buckley, however, saw some of the eggs that were taken on one of these occasions, and they were certainly *not* Crossbills.

There seems to have been a migration of Crossbills to Orkney and the north mainland of Scotland in July 1888. One was seen on the Pentland Skerries on the 9th of that month, and another was picked up dead about the same time, and is now in the possession of Mr. Cameron of Bargar.

Mr. Moodie-Heddle, writing from Melsetter on the 16th July of the same year, says his children reported to him several birds that must have been Crossbills: "All were reddish-coloured, and they were taking the green-fly off the lower side of the sycamore leaves with their tongues," the children thought. They said "they were clinging on the branches with their heads down."

As the trees here referred to are only some 20 feet high, the birds could be very easily well watched.

Some of these birds Mr. Moodie-Heddle found dead; but one or two were still to be seen at Melsetter in the following May (1889).

Sub-family *EMBERIZINÆ*.

*Emberiza miliaria*, L. Common Bunting.

Orc. = *Bunting* or *Thistle-cock*.

Common, and resident in all the cultivated islands the year round, as it has been from the time of Low, who mentions that it is

very good eating. It seems, however, to be less abundant in N. Ronaldsay and the Westray group. In September 1882 Mr. Cowan shot an albino at Finstay.

### *Emberiza citrinella*, L. Yellow Bunting.

When Baikie and Heddle wrote, the Yellowhammer was a rare bird even in winter. Since then it has become abundant and resident through most of the South Isles, especially during the last twenty-five to thirty years, the sowing of whin hedges and making of small plantations no doubt having encouraged it to breed. Mr. W. Reid says that its nest was not a rarity even as far back as 1855. Now, Mr. Ranken says, he sees many birds about Kirkwall, and often finds their nests.

Mr. Watt, however, tells us that as yet the Yellowhammer is unknown at Skail, but that he sees plenty when driving into Kirkwall through the parish of Firth.

In Rousay we found it, in 1883, resident, but by no means common, nor did we perceive that many additions arrived in winter.

In 1888 we saw the Yellowhammer in Hoy and on the Mainland; around Kirkwall it may be called common.

### *Emberiza schœniclus*, L. Reed-Bunting.

Mr. Watt of Skail informs us that in a copy of Pennant belonging to Low there is a pencil note thus: "The Reed Sparrow. At Whiteford Hill, July 1778."

In March 1845 the late Mr. Ranken shot a male and presented it to the Kirkwall Museum.

Since 1848 this species has become more numerous, though by no means common as yet. Mr. W. Reid informs us that the Reed Bunting breeds every year now at Crantit, near Kirkwall. Mr. Moodie-Heddle found a nest at Melsetter in 1865.

Referring to the pair that are recorded by Baikie and Heddle as breeding at Muddiesdale in 1845, it does not appear that the nest was found, though the late Mr. Ranken considered, from its cry and manners, that it (the female) evidently

had a nest. Previous to that the same gentleman saw a pair at Papdale in July 1839, and in April 1840 another pair at Scapa.

In Rousay it is rare, and was seen by Buckley in 1883, on two or three occasions only. Mr. Cursiter informs us that a pair of birds, which, from his description, were apparently of this species, haunted a piece of ground at Quanterness, near Kirkwall, in the summer of 1888.

Reed Buntings are also seen at the Pentland Skerries.

### *Plectrophanes nivalis* (L.). Snow-bunting.

Orc. = *Snow-flake*.

A very abundant winter visitant to all the islands, their numbers varying according as the winter is severe or open.<sup>1</sup>

Mr. Moodie-Heddle says he has seen what he took to be this bird in summer plumage on the top of some of the higher hills in Hoy, and Mr. Irvine-Fortescue also remarks that he saw what he imagined was a family party of three or four Snow Buntings on Hoy Hill on September 21, 1882.

A Snow-Bunting, killed in Sanday in the month of April, and in the possession of Mr. Denison of West Brough, is in full summer plumage.

## Section 4. OSCINES SCUTELLI-PLANTARES.

### Family **ALAUDIDÆ**.

#### *Alauda arvensis*, L. Skylark.

Orc. = *Lavrock* : *Lady's Hen*.

Very abundant, and resident in all the islands, Mr. Salmon in 1831 remarking on their abundance in Sanday.

In Rousay we remarked that the Larks did not seem to soar to such a height as we have observed them on a hot

<sup>1</sup> On December 14th, 1889, Mr. Monteith-Ogilvy shot the only Snow-Bunting he saw in Papa Westray that year up to that date. That winter was a very open one.



day in the south, but perhaps the cold summer of 1883 may have had something to do with this.

In Orkney the Skylark begins to sing early in the year, sometimes even in winter. Here boys will not disturb larks' nests, the bird being still called "Our Lady's Hen."

Mr. Ranken mentions a case where a mouse attacked a tame lark in a cage, and in connection with this Mr. Moodie-Heddle asks the question, "Can Short-tailed Field Mice destroy these birds' nests?" as he once found a piece of carrion, about three ounces in weight, in a nest of this mouse, all minced up.

#### *Alauda arborea* L. Wood Lark.

[Gray, p. 125 of his *Birds of the West of Scotland*, says that the most northern locality he has been able to find for this species is Orkney, where, on February 20th, 1844, a specimen was shot at Stromness, in Dunn's garden. We have no other record than this, which at least seems open to doubt, when, according to Baikie and Heddle, Dunn said that the Skylark left the Orkneys during the winter.]

### Section 5. OSCINES CULTIROSTRES.

#### Family STURNIDÆ.

#### *Sturnus vulgaris*, L. Common Starling.

Orc.=*Stare*, *Stirlin* (B. and H.).

Abundant in Low's time, and certainly not less common now.

Resident, and breeding in almost any place that they can find suitable for placing their nest, even under stones on the beach and in low dykes. It is quite likely that their abundance may be caused by the absence of all ground vermin; and even rats, those great destroyers of eggs, besides young birds, are not common in every place.

They both nest and roost in "doo'-cotes," and indeed so much so as to drive out the rightful inhabitants.

Mr. Irvine-Fortescue says that the large flocks of Starlings disappear when cold weather arrives, but a few remain through the winter. They do not roost in the bushes in cold weather, but in holes about the farm-steadings, several going into the same hole. They also roost in the cliffs, and when netting Rock Pigeons in a dark night, he has seen the Starlings fluttering about the lanterns quite bewildered. Albinos are by no means rare, and we have seen several, the last being in a churchyard at Pierowal in Westray,—a pure white specimen. Starlings are perhaps less numerous in the Westray group, and North Isles generally, than in the rest of the Orkneys.

The following amusing account of this bird was sent us by Mr. Moodie-Heddle:—"A Starling has bred here for some years, which is so tame that it will sit close by and imitate, or try to imitate, any sound I make to it. It whistles to the dog, calls like a Crow, Landrail, gull, Ring-dotterel, etc., so well, that I am often deceived myself. Sometimes, after trying in vain to imitate a sound I have made to it, it will lose its temper, and shuffle up close to where I am, ruffling its feathers up and screaming with anger. It has been here for three years at least." Low also mentions the fondness of the starling for imitating other birds' notes.

### *Pastor roseus* (L.). Rose-coloured Starling.

Has occurred on several occasions; indeed rather frequently. Besides those mentioned by Baikie and Heddle, a MS. note by the last-named author says that two were killed at Kirkwall in 1855.

Mr. Moodie-Heddle tells us he has known of five or six instances of its occurrence in Hoy alone during the last four years, the last being in 1886, when the bird was observed by his factor and several others: he also adds that whenever he has looked into the stories of *white* starlings, it has been a Rose Pastor: this in some three instances.

One of the two referred to as having been killed near Kirkwall in 1855 was shot by Mr. T. W. Ranken's father in Sep-

tember; it rose from the gooseberry-bushes along with some Blackbirds, where they had been devouring the fruit. The other was killed a few days before that in the parish of Evie.

Mr. Begg informs us he has shot several Rose-coloured Pastors in Hoy.

### Family **CORVIDÆ.**

#### *Nucifraga caryocatactes* (L.). Nutcracker.

Mr. Harvey informs us that a Nutcracker was shot in Sanday on 1st of October 1868, as it was feeding on worms like a crow. He adds, "the only one seen here." The specimen is now in the possession of Mr. Denison of Brough, Sanday, where we saw it.

#### *Pica rustica* (Scop.). Magpie.

Mr. Moodie-Heddle informs us that one was seen in Hoy in 1845, and again in 1849.

Mr. Irvine-Fortescue says that some years ago a Magpie appeared at Swanbister. It was suspiciously tame, and he afterwards heard that two ladies had lost a tame one in Harray that summer. It remained a day or two at Swanbister, and then disappeared.

#### *Corvus monedula*, L. Jackdaw.

Orc. = *Kae*.

Low in his *Tour* says:—"Saw here (S. Ronaldsay) the only Jackdaws to be found in the southern parts, and, for aught I know, in the Orkney Isles. A few pairs build in Stowsehead every year." Messrs. Baikie and Heddle add another locality in the same island, but on the opposite side, viz.:—Barthhead, as a breeding site.<sup>1</sup>

Mr. W. Reid, our old and valued correspondent, says that

<sup>1</sup> In a note left by the late Mr. Robert Heddle he says this information has not been confirmed.

they were seen, but not breeding, at the time he left Kirkwall in 1866.

Mr. Moodie-Heddle says (1887), "Several times killed among crows and rooks. Once, 1871, at Melsetter, flying overhead in a mist, taken for a crow. About Kirkwall several were seen during the springs of 1855-1858, and *appeared* to have bred there."

Mr. Ranken says: "Like the Rook, the Jackdaw was only an occasional visitor to Orkney some forty or fifty years ago; now they are numerous; hundreds may be seen in the neighbourhood of Kirkwall. The Jackdaws congregate, during the breeding season, principally at Winwick, South Ronaldsay, building in clefts in the cliff, and making their nest of dry seaweed."

Mr. Irvine-Fortescue also mentions the Jackdaws appearing at Kirkwall, and, in February 1883, he saw a considerable flock of Rooks and Jackdaws, of which about a fifth appeared to be the latter bird.

Mr. Watt of Skail tells us he has never seen Jackdaws in his parish.

Mr. Harvey says that a few Jackdaws appear in Sanday in spring on rare occasions.

In 1888 we found them breeding in the chimneys in the Earl's Palace, Kirkwall. Other large colonies were seen by us at Hersta and Stowse Heads, in South Ronaldsay, in 1889.

### **Corvus cornix, L. Crow.**

Orc.=Crow. Craa. Hoodie-craa.

Most of the crows observed in Orkney belong to the grey variety; indeed, we have only one notice of the black, which, Mr. Reid informs us, was shot by Hubbard, a bird-stuffer from Norfolk, at Kirkwall in 1856. The Grey Crow, though in places not so numerous as formerly, owing to stricter game-preserving, is still common enough, doing vast havoc amongst the eggs of sea-birds, carrying off such large morsels as those of the Guillemot, and eating them just above the ledges from which they were taken.

At Rousay we have seen quite a heap of such shells, some of



which would almost have done for cabinet specimens, and again, in 1888, we found quantities of Cormorants' eggs above the cliffs at the south end of Stronsay, just freshly sucked.

We certainly consider the Crow to be by no means the abundant species one would expect in a county with such an extent of sea-cliff. Of course all the islands have a pair or two, but, seeing that they are systematically destroyed in two islands only, the wonder is that they are not ten times more numerous.

### **Corvus frugilegus, L. Rook.**

The Rook seems to have been only of doubtful occurrence in Low's time.

Messrs. Baikié and Heddle give several instances of the occurrence of this species, either as single birds or in flocks, and say that in autumn 1846 a small flock took up its residence for a few weeks in the plantation at Papdale, near Kirkwall. They, however, do not record it as a breeding species up to 1848. Now, however, they are plentiful, breeding in the trees round the Bishop's Palace in Kirkwall, and Mr. Moodie-Heddle informs us they do so at Melsetter and elsewhere. We have occasionally seen them in Rousay.

Mr. Salmon says [1831] that the Crow (? Carrion) and Rook are never seen on any of the islands.

Mr. Ranken says: "Used to be only an occasional visitor to Orkney, and was looked upon as a rare bird. Now, there are large flocks to be seen about Kirkwall. I have seen forty or fifty nests in the garden at one time, which I have pulled down, as I find their appearance banishes the small birds from it; and I find that the Rook does not scruple to feed its young with the nestlings of small birds. A pair of Rooks built their nest inside a chimney-can, last summer,<sup>1</sup> in a house opposite this one. The heads of the young birds protruded above the can when approaching maturity. Several other pairs built outside the foot of the chimney-cans. The farmers in Orkney have a decided

<sup>1</sup> For an instance of this in Caithness, vide *Vertebrate Fauna of Sutherland, Caithness, and West Cromarty*, p. 150. D. Douglas, 1887.

dislike to the Rooks, believing that they do more harm to crops than good, by eating so much grain and potatoes."

Mr. Irvine-Fortescue tells us that, in March 1878, there were about thirty Rooks' nests at Muddiesdale, where they first nested in 1876, and that, in 1883, there was then a colony at Tankerness.

There is generally a flock of between forty and fifty Rooks to be seen at Skail during the spring, Mr. Watt informs us, but they remain there only for a few days.

In Sanday the Rook is yet a rare bird. Mr. Harvey writes us from there that he shot one on Jan. 27th, 1888, as it was feeding on the side of a corn-stack in a heavy snow-storm.

We have seen most of the rookeries on the Mainland; as yet they have not spread to Rousay.

### *Corvus corax, L.* Raven.

Orc. = *Corbie*. Kroot.

From all accounts, much scarcer than formerly.

In vol. i. of the old *Statistical Account*, dating 1791, a price was set on the heads of Ravens and other vermin.

Low mentions that two or three white varieties of this bird have been found.

Mr. Irvine-Fortescue says that, about 1873, he used to see a flock of about a dozen or so frequently at Swanbister, but that now [1887] he seldom sees even a pair. Mr. Watt says that he does not often see them at Skail, but that they breed in the rocks between there and the Black Craig.

Mr. Ranken has counted nine sitting together on the sea-beach at Eday.

In Rousay Ravens bred [1883] in two places, but the young were not allowed to fly, the keeper going down into the rocks to a place where he could shoot them, the nests being inaccessible. We saw a good many there in the autumn as they came to feed on a dead cow on the beach below the house.

In Sanday they are seen only occasionally, and not at the breeding season.

In Wolley's *Egg-Book*, vol. iii. pp. 283-4, appears the following :—

“*April 15th*, 1849.—The cathedral having been undergoing repairs, the ravens which always built on it (and near to a pair of Kestrels) have left, and, according to report, gone to the old ruins of the Bishop's Palace. Here I climb up, and as the nest of Raven (or Crow) is empty, I fancy it has been taken. The year before I saw nine (?) Ravens at once upon the cathedral.”

Ravens are getting very scarce now in the Orkneys, and in 1888 we only met with them once, in Westray, where we saw a family party of four or five. Mr. Millais says they breed regularly in one place, not far from Stromness. One bird used to attend him regularly when he went out “fighting,” on the chance of picking up a wounded bird ; it would never come near enough to be shot at.

## Order 2. **MACROCHIRES.**

### Family **CYPSELIDÆ.**

#### **Cypselus apus (L.). Common Swift.**

Has been seen more frequently since Low's time, but has not increased much since Baikie and Heddle wrote.

Mr. Ranken's father saw a Swift wheeling round St. Magnus Cathedral, Kirkwall, in company with three or four Swallows, on June 20th, 1847, the second time only in nine years and a half that he had seen them in Orkney. Mr. T. W. Ranken has for several years past, but not always consecutively, seen Swifts, sometimes three or four at a time, circling round the spire of the cathedral, and Mr. W. Reid has also frequently seen them there at the same place. Swifts have also been observed, though rarely, on other parts of the Mainland. Mr. Irvine-Fortescue has seen them occasionally at Swanbister. Mr. Watt has also observed them at Skail, and in the summer of 1866 he shot one near the palace of Birsay.

It is rare in Hoy. The late Mr. J. G. Heddle shot one there in 1861. Mr. Moodie-Heddle shot another in harvest

time at Melsetter about 1871, which had its feet full of clay ; he used to see a pair there almost every year.

In Sanday, Swifts are also rare, but are seen occasionally. Mr. Harvey shot one there in June 1883.<sup>1</sup>

We saw one in Westray on June 25th, 1888 ; the only Swift we saw that year in Orkney.

### Family **CAPRIMULGIDÆ.**

#### **Caprimulgus europæus, L. Common Nightjar.**

Since Messrs. Baikle and Heddle published their work, we have very few records of the Goatsucker in Orkney. In a note by the latter author he says : " Still occasionally seen in Sanday." Mr. Cowan says it is a rare visitant.

Mr. W. Reid saw two killed at Kirkwall in April (?) 1868.

In 1888 Mr. Harvey got a pair of Nightjars in Sanday. The first was seen towards the end of May, and picked up nearly dead from cold, on the 4th of June ; this was a male. The female was shortly after caught near Mr. Harvey's house in a stable, and was bought by that gentleman, who sent the two to be stuffed.

### Order 3. **PICI.**

#### Family **PICIDÆ.**

##### Sub-family **PICINÆ.**

#### **Picus major, L. Great Spotted Woodpecker.**

An irregular autumn and winter visitant ; at times their numbers amount to a regular "irruption," as in 1861. Since then scarcely a year has passed without some few of these birds being seen or procured, and there seems to have been another rush in 1868,\* when they were numerous at Melsetter in September of that year.

<sup>1</sup> Probably the one that is now stuffed, and in the collection of Mr. Denison of West Brough, Sanday.



They seem to have been procured in most of the islands of the group from N. Ronaldsay southwards. Some that were shot in Sanday, in October 1870, were sent to the museum at St. Andrews.

Dr. J. F. M'Conaghy sends Mr. Spence the following note : —“ Woodpeckers (Norwegian). Two shot in Sanday in Sept. 1868. Numbers of these birds were seen in N. Ronaldsay and Sanday. The weather, previous to their arrival, had been remarkable for strong gales from the *west*. It was considered that these specimens might be American, but Dr. Rae felt confident that they were Norwegian. It was interesting and melancholy to see a flock of these birds alight on a number of logs of wood, part of a cargo of a ship wrecked on the east side of Sanday, and begin vigorously to tap the wood according to their habit.”

Mr. Moodie-Heddle saw a single Woodpecker tapping at the posts put up for wire-fencing at Melsetter in Sept. 1887 ; and Mr. W. Irvine-Fortescue saw a bird in the garden of Westness, Rousay, in 1887.

The Great Spotted Woodpecker would seem to be a somewhat early migrant, as it has been seen in Orkney both in the middle and end of September.

#### *Picus minor*, *L.* Lesser Spotted Woodpecker.

At present we have no further notice of the occurrence of this bird in Orkney than the one the editor of Low's work mentions having killed at Stromness in the winter of 1774 ; and another recorded by Baikie and Heddle as having been seen in Sanday in 1823.

#### *Gecinus viridis* (*L.*). Green Woodpecker.

Since Baikie and Heddle's time, we have only heard of one instance of the occurrence of the Green Woodpecker in Orkney.

Mr. T. W. Ranken informs us that he saw a specimen of this bird in his garden at Kirkwall in July 1885. It was clinging to a high branch of a sycamore, and kept moving upwards in a direction more or less oblique, and the tapping it made in its search for food was quite distinctly heard, and attracted his

attention. After watching it for a few minutes, the bird flew away, evidently startled by people passing near where it was perched.

Sub-family *IYNGIDÆ*.

*lynx torquilla*, L. Wryneck.

A rare visitant, but we have notes of several having been either seen or captured since the solitary specimen recorded by Baikie and Heddle.

In a MS. note by R. Heddle, one of the authors above mentioned, he says that a Wryneck was seen at Melsetter in an apple-tree, and that several have been killed at Holm, etc., since the publication of their book.

Mr. Moodie-Heddle sends us notes of two seen at Melsetter, one in 1841, and another in 1850; but these may well be the same as those just referred to, and of which we have no dates.

The late Mr. Ranken saw a specimen which had been obtained in Orkney by Dr. Duguid in 1855.

Mr. Traill of Woodwick informed Mr. Spence that a specimen was got in N. Ronaldsay about 1865, and another was obtained by Dr. Logie of Kirkwall a year or two later, taken in one of the North Isles. Since then Dr. Traill obtained another specimen, picked up dead near his garden in N. Ronaldsay on May 6th, 1886.

Buckley shot a male Wryneck in Rousay on September 8th, 1883, as it was flying and settling on a stone wall along the roadside.

## DESMOGNATHÆ.

### Order 1. COCCYGES.

Sub-order *COCCYGES ANISO-DACTYLI*.

Family *ALCEDINIDÆ*.

*Alcedo ispida*, L. Common Kingfisher.

We have no further instance of this bird's appearance in Orkney since the one mentioned by Low as having been seen by him.

Indeed from its rarity all through the north of Scotland, as well as in more northern countries, it could never be anything else than a very uncommon visitant.

### Family CORACIIDÆ.

#### *Coracias garrula*, L. Roller.

The first mention we have of the Roller in Orkney is in the 2d edition of Wallace's *Description of the Orkneys* (1700), where he mentions this bird as occurring along with the Hoopoe.

In a MS. note by the late Robert Heddle, he says that in thirty years Mr. Strang saw seven Rollers in Sanday. Mr. Moodie-Heddle says his father shot a Roller on the Melsetter links, but gives no date.

In a letter from E. F. Sheppard to T. C. Heysham, he says: "About the middle of June 1843 a Roller was caught by a cat in S. Ronaldsay, which, I was told, was not the first time this bird had been killed there."

In 1869 Mr. Peter Anderson, lighthouse-keeper, shot a Roller in Sanday about October of that year.

Mr. Ranken informs us that a specimen of this bird was found lying dead underneath a boat in the island of Eday in the winter of 1874.

### Family UPUPIDÆ.

#### *Upupa epops*, L. Hoopoe.

As early as 1693 the Hoopoe is mentioned by Wallace as having occurred in the Orkneys.

Besides those mentioned by Messrs. Baikie and Heddle in their work, we have notes of several others having been obtained.

Mr. W. Reid tells us he has noted in *Land and Water* some four or five specimens shot in Orkney since 1841.

Mr. Begg, Stromness, informs us that he, in 1842, shot three Hoopoes at one shot, out of a flock of fourteen, in Sanday, and he has stuffed two since. It is not often that these birds appear in such numbers.

Mr. Cowan mentions that there was a Hoopoe in the late

J. Dunn's collection, shot in Sanday. Hubbard killed one in 1858, and the late Mr. Hebden another in Eday, in 1859.

Mr. Irvine-Fortescue saw a specimen in the flesh killed at Stromness about the years 1878 or 1880, and now, or lately, in the possession of Mr. James Spence.

On May 12th, 1883, Mr. T. W. Ranken heard that a dead Hoopoe had been picked up in Sanday a few days before, which had probably died from the effects of the boisterous weather that had prevailed for the previous three weeks.

Mr. Harvey informs us that a Hoopoe was shot in Sanday, in April 1886, while feeding with some Starlings: this is most likely the one in Mr. Denison's collection at West Brough.

### Sub-order *COCYGES ZYGODACTYLI*.

#### Family *CUCULIDÆ*.

#### *Cuculus canorus*, L. Cuckoo.

Orc. = *Gowk*. (Low only.)

Although Low mentions that the Cuckoo breeds in Orkney, in the old *Statistical Account* for 1793, vol. vii. p. 546-7, it is stated, "No Cuckoos are ever seen in this country (Kirkwall)."

It is not even yet by any means abundant, but visits most of the islands at times, and is most numerous in Hoy and the Mainland.

Mr. Ranken's father gives dates, from 1855 to 1862, on which he saw or heard the Cuckoo, and Mr. W. Reid also mentions seeing one at Crantit in 1858, as if both these gentlemen considered the bird a great rarity. Mr. Reid adds that since then it had been seen and heard in several plantations, but not by him.

Mr. Cowan also says the Cuckoo is a yearly visitant, but yet uncommon.

Dr. Traill of Woodwick informed Mr. Spence that "since more trees have been planted this bird has been more frequently seen, and is common in Rousay as well as at Binscarth and other parts of the Mainland."

Mr. Harvey calls it a rare visitant to Sanday, and mentions



one shot in August 1880, which was sent to a merchant in Kirkwall.

Mr. Moodie-Heddle says that it now occurs annually at Melsetter and Binscarth. He also adds, in a letter dated Dec. 26th, 1887: "Cuckoos used to be very common behind Melsetter, where there were some 20 acres of tall gorse in which small birds bred. The rooting out of this made them pass us, and for some years we heard none. The gorse is getting up now again, and the Cuckoos are beginning to return." Thus one was heard there on May 10th, 1890.

In Rousay we heard the Cuckoo on only one or two occasions in 1883.

Mr. Ranken says that the Cuckoo visits Orkney now every summer, and he has seen three together in Muddiesdale plantation. A trustworthy informant assured him that some years ago he counted seven sitting on a garden wall early one summer morning.

Mr. Monteith-Ogilvy informs us that a Cuckoo was seen in Papa Westray in 1889.

## Order 2. **ACCIPITRES.**

### Sub-order *STRIGES.*

#### Family **STRIGIDÆ.**

Orc. = *Katogle*, which is applied to all Owls.

#### *Strix flammea*, L. Barn Owl.

[*Obs.*—Though mentioned by Low, Mr. Moodie-Heddle thinks that gentleman must be in error, as he has never seen this bird or heard of it breeding in Orkney. Certainly we saw nothing of it in Rousay, where, according to Messrs. Baikie and Heddle, it is said to breed. As might be expected from its distribution in the neighbouring counties of Sutherland and Caithness, it is a very rare bird in the north, and we have no notes of it from any of our Orkney correspondents.

In a note by the late Robert Heddle he adds, "does not breed in Orkney."]

Family **BUBONIDÆ**.**Asio otus (L.). Long-eared Owl.**

This species seems to have become commoner of late years, at least in Hoy, as Mr. Moodie-Heddle tells us they frequently come to Melsetter, where there are some trees, and that they even bred there in 1882. No doubt, could plantations be grown to any extent in the islands, these birds would increase.

The late Robert Heddle stated that a bird of this species was killed at Papdale in 1849. Another was shot in Shapinsay, on 8th October 1873, by the late James Sinclair, birdstuffer. Mr. Barnett, Crown Chamberlain, shot one at Muddiesdale on December 4th, 1879, and another a few days afterwards. He gave one of these birds to Mr. J. Petrie, writer, who had a large collection of Orkney birds.

Mr. Ranken tells us he has frequently seen this species in Orkney in the winter. A friend of his obtained a pair in Muddiesdale plantation on December 17th, 1887. They are naturally rare in Sanday, but we have a note of one killed there, in October 1830, by Mr. Strang of Lopness.

Mr. Buchanan of the National Bank, Kirkwall, showed us a Long-eared Owl killed in the Muddiesdale plantation in January 1888, and told us he had shot at least ten of these birds there, always during snow in winter.

**Asio accipitrinus (Pall). Short-eared Owl.**

Orc. = *Cutty-face*.

Low, both in his *Tour* and *Fauna*, mentions this Owl as being very plentiful and breeding in Hoy. Messrs. Baikie and Heddle also mention the species as very common in Orkney, and remaining throughout the year.

In Rousay we were told that it was much commoner formerly, *i.e.* previous to 1883. In that year we got one nest of six eggs, the only one the keeper could find in the island. This pair very probably bred again, as neither of the birds were killed, and Buckley constantly saw a pair hunting along the edge of the Muckle Water in the late afternoons of July and August when fishing there, which always returned to the same hill on which the

keeper had previously taken the nest. After the late autumn we saw more of these birds in the island.

The Short-eared Owl occurs all through the Mainland, and has been shot on several of the other islands, as Sanday and Westray; it does not, however, breed in Sanday.

Mr. Ranken says it is more plentiful than any other species of owl in Orkney, and remains there the whole year round, breeding in the heather.

In the Swanbister district it has become very rare. It formerly nested regularly there, so Mr. Irvine-Fortescue informs us, but he fears now (1888) that they are driven away for ever. Dunn, the naturalist in Stromness, used to give 6d. each for the Hen-Harrier's and Short-eared Owl's eggs. Although this was cheap, adds Mr. Irvine-Fortescue, the natives thought it dear, and the birds decreased in consequence. Much of the long heather, which formerly was plentiful, is now burned for pasture; this, too, is much against the owls.

In 1888 Buckley was informed by the keeper at Rousay that he had only found one Short-eared Owl's nest that season, and this he did not disturb: he thought, however, there was another, but did not look for it.

In 1889 we saw young birds that had been taken from a nest on Wideford Hill, where a pair or two still linger.

Every one knows that this owl can and does hunt in the day-time *in the breeding season*; but does it ever do so in the winter? The places most frequented by it, and many other species of owls, during the breeding season, are in the north, where there is practically no darkness during the time the young are being fed, so the old birds *must* hunt in the light.

Mr. Moodie-Heddle tells us he has seen a Short-eared Owl take a half-fledged snipe on the wing.

### *Syrnium aluco* (L.). Tawny Owl.

[*Obs.*—Low in his *Fauna* mentions that this species is found in the more hilly parts of Orkney in summer, but he never saw or heard of it in winter, so concluded it was a migratory bird. He compares its shyness with the boldness of the Short-eared Owl.

Messrs. Baikie and Heddle seem to have taken Low's description to a great extent for their own use, as they say it is not common, but builds in retired hilly districts, and is extremely shy.

Mr. Moodie-Heddle considers the foregoing authors were in error altogether about this owl, and adds that he never saw it in Orkney.

Mr. Harvey sends us word that a Tawny or "Screech" Owl was shot in Sanday about 1869, and this very unsatisfactory note is the only one we have received from all our correspondents about the species.]

### *Nyctea scandiaca* (L.). Snowy Owl.

Though perhaps never so abundant as in the Shetland Islands, the Snowy Owl seems always to have been a not very uncommon visitor to the Orkneys.

Professor Newton called our attention to the following account in Bullock's Catalogue:—"In July 1812, in the island of N. Ronaldsay, one of the Orkneys, we were informed that a bird of this kind had been seen on the rabbit warren on (or ?) Links for several weeks, and shortly after I had an opportunity of examining it for some time at the distance of about forty yards. It was a male (the specimen now in the museum), and its companion had been killed a few months before on the island: one of them had likewise visited the adjacent isle Westra, and remained there for some time."

In a letter from E. F. Sheppard<sup>1</sup> to T. C. Heysham, dated Sept. 28th, 1840, he says:—"except the Snowy Owl, which, from the description given me of the bird, I am inclined to think has many times been seen there (Orkney) in the winter season, but as there are few gunners and few collectors, it has very rarely been shot. There is a specimen in the Edinburgh museum which was shot in Orkney some years ago."

About November 1840 Sheppard's brother, who seems to have resided in Orkney for some considerable time, wrote

<sup>1</sup> Mr. Sheppard, who lived at Ipswich, was a martyr to rheumatism, and was ordered by his doctor to try Orkney for a change. Although not by any means curing him, it seems to have somewhat relieved him, and he made several stays of longer or shorter duration at Stromness. He communicated pretty regularly from there with Mr. T. C. Heysham of Carlisle.



him saying, that when in a boat on the Loch of Stenness, he saw a Snowy Owl, which passed within 150 yards of them.

Mr. Ranken tells us that a fine specimen of this bird was shot at Lopness, Sanday, by the late Mr. Strang in 1844. This bird is nearly pure white, and is in the possession of Mr. Ranken, whose brother-in-law, Mr. Hebden of Eday, has also a beautiful specimen, shot by his father at the Red Head of Eday.

Mr. Harvey tells us that one was shot in Sanday, Oct. 1869, while eating a rabbit. Mr. Reid sends us a note that these birds are frequently seen and shot.

There is a stuffed specimen in the collection of Mr. Denison of West Brough, Sanday, which was obtained in that island, and is perhaps the one referred to as having been shot in 1869.

Under date of Oct. 29th, 1889, Mr. Ranken informs us in a letter that "there is a large white owl in Sanday just now, most likely a Snowy Owl."

### *Nyctale tengmalmi* (Gmel.). Tengmalm's Owl.

[*Obs.*—In a note by Mr. Moodie-Heddle is the following: "This (Tengmalm's Owl) was killed at Melsetter, Nov. 7th, 1851, by Dr. M. F. Heddle. The bird had remained all summer in a tree near the house, within 12 feet of the dining-room window. Dr. Heddle, who had only arrived the evening before, was not aware of this, and killed it with such a large charge of snipe-shot at close range, that the skin was spoilt—the wings, however, were put in spirits.<sup>1</sup>

"The bird was not very like the usual coloured figures in Jardine's *Naturalist's Library*, etc., being less reddish coloured, and the wings spotted with yellow like a Golden Plover's, but the spots larger." This is the bird referred to by Gray in his *Birds of the West of Scotland*.

We have also a notice of another of these birds from Mr. Cowan of Tankerness House, who informs us that a Tengmalm's Owl was seen at Rendall, on the Mainland, by Major Beadnell, R.A., in 1882, and Mr. Cowan adds that the Major is a competent judge.

We think the foregoing evidence scarcely sufficient to

<sup>1</sup> The wings are not now forthcoming.

warrant our including this species otherwise than in brackets, especially as in a pencil note by Professor Heddle in a copy of Messrs. Baikie and Heddle's work he says, "No, it was passerina."]

### **Bubo ignavus, Forst. Eagle Owl.**

According to Messrs. Baikie and Heddle this is the "Stock Owl" mentioned by Wallace, though we can find nothing in the context to warrant their assertion. They, however, mention that an Eagle Owl was killed by Mr. Strang at Sanday in 1830. That it is *believed* to breed in the Hammers of Birsay is a statement for which we can find no foundation. Indeed, it is most unlikely that the breeding-place of such a fine bird would not be *well known*.

Low, in his *Fauna*, says that he never saw the bird himself, but was *credibly informed* that it was still to be met with in his day in the Orkneys, especially in the hilly parts.

In a pencil note by the late Robert Heddle he observes that the Eagle Owl does not breed in Orkney.

In the same letter as the one referred to under Snowy Owl, Mr. Sheppard's brother says that he also saw a bird which he thought to be the Eagle Owl.

### **Athene noctua (Retz.). Little Owl.**

[*Obs.*—Included in the list of Orkney birds, published in Anderson's *Guide to Highlands and Islands of Scotland*, but no locality or date is given. This may possibly refer to the small owl (see Tengmalm's) killed at Melsetter. It is impossible now to say to what species this bird belonged, but that a small owl was killed at Melsetter there can be no doubt; probably it was *G. passerinum*.]

## Sub-order ACCIPITRES.

### Family FALCONIDÆ.

### **Circus æruginosus (L.). Marsh Harrier.**

Messrs. Baikie and Heddle mark this bird as an occasional visitant to Orkney, and mention Sanday and Rousay as localities.

The late Mr. Heddle of Melsetter saw "one bird of this species for three years at Melsetter," but Mr. Moodie-Heddle writes us that he never saw or heard of it in Orkney. He adds:—"One (was) said to have been killed by Dr. Logie, another by Dr. Traill in 1866."

Mr. Watt of Skail, writing us in Jan. 1888, says that in the early part of the summer of 1865 or 1866 an uncle of his, who knew birds well, when walking in company with Mr. Watt through the township of Yucanabee, saw a Marsh Harrier, and Mr. Watt adds that since then he had been told that it had been known to nest in Orkney, but gives no authority for this statement. Mr. Boyes informs us that when in Orkney in 1866, he saw a Marsh Harrier, stuffed, in J. Dunn's possession at Stromness, but got no particulars.

Mr. Spence writes that a Marsh Harrier was preserved by the late James Sinclair, which had been shot by Mr. Watt of Skail in December 1875, but that gentleman never mentioned the fact to Buckley, who, when on a visit to him in 1888, made particular inquiries about this species; we therefore must conclude Mr. Spence had been wrongly informed.

We are at length able to add this bird to the Orkney list decisively, through Mr. Millais, who has sent us the following account of his capture of one:—

"I was shooting Rock Pigeons at the eastern end of the cliffs known as the 'White Breast' (Hoy), and had landed to climb up to the top of the rock where a wounded bird had fallen, and was endeavouring to catch it before it tumbled over the rocks again, when I saw a large Harrier, with a light cream-coloured head, beating along the face in my direction; whereupon I lay down, and waited till he came to within about 30 yards, and then shot him. He proved to be, as I thought, a Marsh Harrier, being a young bird of the year in first plumage. This occurred on November 28th, 1883."

"On another occasion, when returning with James Sutherland in his boat from Risa Little, a large Harrier, which I imagined to be of this species, passed quite close across the bows of the boat. My gun was lying a few feet off, and the bird was out of shot before I could reach it, the weather being rough."

**Circus cyaneus (L.). Hen-Harrier.**

Orc. = *Kattabelly*.

Probably the commonest hawk throughout the islands. It is not mentioned by name in Wallace's *Description of Orkney*, but it is most probably one of the species included in the comprehensive term "Hawks," or, more likely still, "Gleds." Low in his *Fauna*, after remarking that the species is very frequent all the year round, makes the curious remark that, in winter, it is almost white, except the tips of the wings, but in the summer it is more ash-coloured. Dunn, in his *Ornithologist's Guide*, 1837, makes no mention of the bird, which is strange, but then he takes no notice of the Kestrel, so we must conclude that the omission is an oversight. Very common in 1848, according to Baikie and Heddle.

Several appear in a list of birds from the Orkneys, stuffed by Mr. Small, Edinburgh, up to 1885. Buckley met with it not uncommonly in Rousay in 1883, but mostly in the autumn and early winter. In that year the keeper on Rousay shot the *male* from the only nest he found, the female, strange to say, never coming near it; this is quite contrary to our usual experience of harriers. A bird seen in November had only partially assumed the adult grey plumage of the male.

Mr. Moodie-Heddle writes us: "Very common. I had a tame harrier when a boy, which would sit on my shoulder when rabbit-shooting, and jump down to get the brains when a rabbit was killed. It was not the least afraid of the gun, although originally got by being winged." He also goes on to say:—

"I have kept many hawks of different kinds, and have always considered them the easiest birds to tame, if you know how to go about it. Persistence for a few hours will enable you to make the wildest old hawk sit on your hand and eat from your fingers. I have done so with old birds taken near the nest, both Peregrines and Kestrels. Merlins are somewhat harder, or, at least, take longer time."

Mr. Irvine-Fortescue informs us that the castings of the Hen-Harrier and Kestrel contain, among the fur and small bones of mice, voles, etc., a considerable quantity of the wing-cases and other remains of beetles. Many years ago this gentleman saw an albino Hen-Harrier flying about Melsetter,



and the same autumn he read in a newspaper that such a bird had been killed near Thurso. Mr. Spence found these birds most numerous in the parish of Orphir, and in 1882 obtained altogether eight specimens of their eggs in that district.

Mr. Irvine-Fortescue sends us the following notes :—

“I have over and over again seen grouse, snipe, and other birds rise from under a Hen-Harrier, the latter making a spasmodic sort of endeavour to drop down on the bird, but never making even really a dash, much less the least attempt at giving chase. A Hen-Harrier flying over a swamp will put all the snipe out of it. Grouse and all other birds rise as the harrier comes along, while a Peregrine or Merlin, on the other hand, causes the birds to sit close. I do not believe a harrier can catch any bird that is not asleep or incapable of flight. I have found the remains of half-fledged grouse in their nests, but their principal food is the common vole, and on account of the numbers of this animal which they kill, I think they should be preserved.”

“The Hen-Harrier is sometimes called the ‘Goshawk’ by the Orcadians, hence mistakes may arise; these birds are much scarcer in winter.”

“In 1887 there were several nests (near Swanbister), usually there are not above two, on the Ward Hill of Orphir. But, although I wished them left alone, I think few young birds escaped. The old birds took one or two chickens, which I would gladly have replaced to save the hawks, and people, consequently, killed the young birds and took the eggs.”

“In a nest containing from three to five young birds, no two are of the same age, and there must be nearly a fortnight or so between the oldest and the youngest. The first hatched, no doubt, help to hatch the remaining eggs, while the parents are off hunting.”

Mr. Harvey informs us that the Hen-Harrier does not breed in Sanday.

Mr. Moodie-Heddle informs us (1888) that not more than two pairs of Harriers breed in the whole of Hoy. There were two nests at Swanbister in 1888, but both were harried, to Mr. Irvine-Fortescue's sorrow, as he likes to see the birds on his ground. In the same year there was a nest in Rousay.

In Mr. Irvine-Fortescue's collection are two most beautifully marked Hen-Harrier's eggs, indeed they might well be passed off as Buzzards'.

**Buteo vulgaris, Leach. Common Buzzard.**

In some notes by Mr. Moodie-Heddle's father, it is stated that a large buzzard (species not mentioned), had been seen several years at Melsetter,—in October 1857, and again in 1860 and 1861.

In an article by Capt. Clark-Kennedy on *Wild Sport in the Orkney Isles*, in *Baily's Magazine* for April 1884, p. 162, that gentleman mentions seeing a Common Buzzard feeding on some dead animal, near Stromness.

Buckley saw what he took to be one of this species in Rousay, on November 2d, 1883, and Mr. Millais tells us he noticed a Common Buzzard flying very high in a southerly direction over Hoy, in August 1888.

These are all the notices we could collect of this species, showing how extremely rare the bird is here.

**Archibuteo lagopus (Gmel.). Rough-legged Buzzard.**

Mr. R. Gray, in his *Birds of the West of Scotland*, p. 48, has this paragraph :—"In January 1866 a fine adult specimen was shot in the island of Raasay (*sic*), in Orkney." As there is no island of this name there, Mr. Gray probably refers to Rousay. It was at Trumbland House, the residence of Gen. Burroughs, in that island that we saw two fine stuffed specimens of the Rough-legged Buzzard, and were told that they had been shot there, though we do not now remember the dates of their capture.

Buckley distinctly saw one in Rousay, on November 1st, 1883, hovering over the hill not far from Westness House.

**Aquila chrysaëtus (L.). Golden Eagle.**

It is very improbable that the Golden Eagle was ever a common species; indeed, it is likely that it was always confined to the

island of Hoy. Wallace wrote of the abundance of the "Eagle or Erne," but he probably referred to the White-tailed Eagle, and even Low never seems to mention the Golden—as distinct from the Sea—Eagle. Robert Dunn mentions this species as breeding on the west side of Hoy Hill, but adds that "it is so scarce that I only saw a single pair." Ten years later Messrs. Baikie and Heddle also mention a *single pair only*, though they add that "several years ago they had two breeding-places," on this same island of Hoy; this, however, need by no means imply that there were two pairs of birds, as it is well known that eagles do not always use the same eyrie two years in succession; indeed, to do so seems the exception, though the two sites may not be very far apart.

In Salmon's Diary of a visit to Orkney, under date June 2d, 1831, we find this entry:—

"Went over to the island of Hoy. . . . There are two sorts of Eagles breed among the rocks, the Golden Eagle (*Falco chrysaetos*) and Sea Eagle (*Falco ossifragus*) or Fishing Eagle. We were informed by a man who has taken their nests for several years past that both of them lay from two to three eggs. He had taken three eaglets from the nest of the Golden Eagle this summer, and one of them is now living at Stromness."

Through the kindness of the Rev. H. A. Macpherson, we have been favoured with the loan of the correspondence between T. C. Heysham and E. F. Sheppard during the latter's stay in Orkney. Sheppard, though not a collector himself, used to get eggs and birds for his friends, and sent Heysham some eggs both of the Golden and White-tailed Eagle.

In a letter dated 21st October 1840, Sheppard said that in 1839, there were four Eagles' nests in Hoy, and that every one was robbed. Two were Golden and two White-tailed Eagles, and all the eggs from their nests were white. One of these white eggs of the Golden Eagle was sent to Heysham, who, from its colour, considered it really was that of the White-tailed species.

In the summer of 1840, Sheppard said the Hoy men only took one egg of the Sea Eagle, the Golden Eagles having shifted their quarters and built their nests where they could not be got at.

In another letter, dated July 5th, 1841, Sheppard writes:—

“I am sorry to say there are no Golden Eagles’ eggs to be had this season. The Hoy cragsmen say there are this year but one pair of these birds and a single bird, and that they do not even know whether there is a nest or not.”

From internal evidence in this letter it appears that the Hoy men considered the eggs of the Golden Eagle much more valuable than those of the Sea Eagle, and that the former birds rarely seemed to have laid highly-coloured eggs, the only difference between the eggs of the two species there being that the Golden Eagle’s eggs were rather smaller and rounder.

In 1842 Golden and Sea Eagles’ eggs were taken in Hoy and sent to Heysham.

In 1843 the whole island of Hoy came into the possession of one proprietor, who stopped the taking of Eagles’ eggs altogether, as far at least as he could.

In a letter from Robert Dunn to T. C. Heysham, dated December 23d, 1844, he says:—

“The Golden Eagles do not breed in Shetland that I know of at all. I know of *one pair* that breeds in Hoy.”

We have italicised this statement, as it bears out what we are trying to make good, viz., that only one pair of Golden Eagles bred in the Orkneys.

Gray was informed by J. Dunn, Stromness, that no Golden Eagles had bred in Hoy for a number of years, and that the only recent specimen procured there was one shot in 1857, and supposed at the time to be one of the only pair that had many years previously bred near Radwick (? Rackwick) on the west side of Hoy.

Mr. Moodie-Heddle, writing us in December 1887, says that the Golden Eagle has not bred in Orkney for about thirty-five years, and that it “rarely occurs.” He adds that within his memory it bred in Hoy.

Mr. T. W. Ranken informs us that his father obtained a fine specimen of the Golden Eagle at Firth, which had been injured by a lad named Cursiter shortly before. It was a full-grown male, and weighed 12 lbs. This was in January 1845.



One, now stuffed at Binscarth, Mr. Irvine-Fortescue tells us, was obtained at Linnadale in the following curious way :— “A man named Andrew Groundwater came upon an eagle one morning on the hill not far from his house, which had apparently just killed a hare. He went back for his gun, and returned to look for the bird, intending to shoot it as it rose. When he approached, the bird, instead of flying away, lowered its head and spread out its wings. Seeing this the man walked back a few steps so as not to injure the bird too much, and fired. On skinning the bird only one shot was found in it, which had entered between the eyes. Groundwater sold the bird to a tinker for half-a-crown, and Mr. Scarth got it from the tinker for five shillings. This was about thirty years ago. On another occasion the same man found another eagle eating one of his tame ducks, but his inherent respect for the “Sabbath” prevented his going after it. Dunn told Groundwater afterwards that if he ever shot another eagle he would give him a guinea for it.”

From inquiries made in Hoy in 1888, and from our own observations, it is highly probable that there never was more than one pair of Golden Eagles in Hoy. The place where they bred was pointed out to us ; indeed, there was no difficulty in locating it for ourselves, there being only this one likely spot among the inland rocks. They *may* have bred on the sea-cliffs, but this is against all our present knowledge of the habits of this bird, and it seems very probable that the Hoy men palmed off the smaller and rounder Sea Eagles' eggs as those of the Golden species, as at that time they were the rarer, and commanded a higher price.

### *Haliaëtus albicilla* (L.). White-tailed Eagle.

To within a comparatively recent date this species seems to have been abundant wherever the rocks afforded a convenient site for nesting. Wallace speaks of them as being a regular pest :— “Eagle or Earns and Gleds are here in plenty, and very harmful to the young store ; yea, they have been found to seize upon young children, and carry them a good way off, and there

is yet a man alive who was thus carried away by an Eagle (while a child) to her nest, but was so speedily, by the blessing of God, prevented, that no harm was done to him. We have a law that if any kill one of the Eagles, or Earns, he is to have a hen out of every house in the parish in which it is killed."

In the old *Statistical Account* of Scotland (1793), vol. vii. p. 393, it is stated that the Commissioners of Supply give a crown for every Eagle that is destroyed in Orkney.

Low, in his very interesting *Tour*, mentions Hoy (where he saw several pairs of the Erne, or Ringtailed Eagle), and Mull Head, in the parish of Deerness, on the east of the Mainland, as breeding-places of the Erne, as also one place on the island of Switha. It was after the inspection of the south and east of this island that Low started off from Kirkwall on his voyage to Shetland, and he seems never to have finished his tour through the rest of the Orkneys, or we should have had many more exact sites given us. Robert Dunn only gives Hoy as a breeding-place. Messrs. Baikie and Heddle, however, give three sites in Hoy, one in Eday, one at Costa Head on the Mainland, and one in S. Ronaldsay, as being known to them "about fifteen years ago." They add: "At present they build at the Berry and at Bræburgh, in Hoy." Even in 1848 the practice of offering large sums for eagles' eggs had done much injury by the destruction of many nests, and, say Messrs. Baikie and Heddle, "but that the present proprietor protects the birds very carefully, the species would soon be extinct in Orkney." Crichton mentions that a pair of birds "which have been known to settle here year after year have only been very casually noticed in the course of the present season (1860), and have not as yet taken up their permanent abode."<sup>1</sup> J. Dunn, writing R. Gray, says, "Only one pair of Sea-Eagles have nested in Hoy for several years back; they are supposed to be very old birds, and unproductive. In 1865 their nest was got at, but was found to be empty, and, in the following year, their nest in another part of the cliffs was also reached, but found to contain one egg, and that an addled one." During his stay in Westness, in the island of Rousay, Buckley was informed that

<sup>1</sup> *A Naturalist's Ramble in the Orcaes*, p. 63.

eagles once bred there, but could get no dates given him. They were probably destroyed on account of the havoc they made amongst the native sheep, which were of a very small breed, and therefore easily carried away. The Erne still visits the island, though rarely, and General Burroughs has an immature one stuffed in Trumbland House.

Mr. Moodie-Heddle writes us: "There has only been occasionally a nest for the last twenty-five years. I remember when there used to be seven or eight breeding-places (referring to Hoy). My father and grandfather used to keep a pair tame. I believe they have really been exterminated by people offering rewards for the eggs, since I never knew of any one shooting or trapping an eagle in Orkney, within my memory" (Dec. 1887).

In a pencil note by the late Mr. Heddle in a copy of Baikie and Heddle's book, he says: "My care does not save them; only one pair built in 1862.—J. G. H."

Mr. Irvine-Fortescue, in or about 1874, had pointed out to him the place where a pair of these birds had bred the previous year, between Hoy Head and the "Old Man;" he was also informed, though perhaps not on very trustworthy authority, that a pair of Eagles (most probably White-tailed) were shot off the nest, in Hoy, in the spring of 1869.

Mr. J. Barnett has a note of one shot on the island of Viera, a day or two before Christmas, 1882, apparently a young bird.

Mr. Ranken informs us that a pair of Eagles frequented the Red Head of Eday, a former breeding site, in the winter and spring 1887, and that they were most likely of this species, from the description given of them. Mr. Ranken paid a visit to the island in the hopes of seeing them—*not shooting them*—but was unfortunately disappointed, the birds having left the locality.

Mr. Watt of Skaill has noticed Eagles there nearly every year from 1875 to 1882, and he one year saw a pair circling over the hill of Kurfield, in the months of June and July.

The following notes we had from Mr. Moodie-Heddle himself during our visit to him in 1888:—

White-tailed Eagles were very common in Hoy, there being at one time ten or twelve pairs in the sea-cliffs. He thinks

they became extinct from being continually robbed, the old birds at last becoming too old to breed; he never heard of many being killed. They fight a good deal amongst themselves. A pair were observed so engaged in Hoy, and a short time afterwards a dead one was found by a shooting-party in the heather, most probably one of the combatants. A pair which were kept tame in Hoy once began to build a nest in their cage, but some one stupidly took the sticks away when cleaning the cage, and they never tried again. Before that time the two birds lived peaceably together, but after that they began to fight, and a few years after the hen killed the cock.

About forty years ago a Sea-Eagle came ashore, in Hoy, dead, fast in a fish, and another time a halibut was found with an eagle's feet still in its back, the bird having rotted off: this latter case, however, was in Shetland.

A pair of Sea-Eagles were observed in Hoy fighting in the air, and were seen to fall dead, or nearly so, by a keeper who picked them up. They were stuffed, and in the possession of Mr. Heddle's father at one time. The man who found them is still living in Stromness (May 1888).

White-tailed Eagles when excited or angry ruffle out the small feathers of their neck, and keep them stiff.

We have been, perhaps, unnecessarily full in our notes on the Orkney eagles, but as a breeding species they are now quite extinct, and rarely occur even as a passing migrant.<sup>1</sup> Indeed the Sea-Eagle is rapidly disappearing all through Scotland, so it behoves naturalists to try and make their memorials accurate and full, seeing that, in the Orkneys at least, this is all that is left us.

### *Astur palumbarius* (L.). Goshawk.

[*Obs.*—Though several writers, from Low downwards, have recorded this bird as common and breeding in the Orkneys, in one instance adding, in a great flight of imagination, that they did so in "tall fir trees," there can be no doubt that all this is an error, and that some other bird, perhaps the Peregrine, has been taken for it.

<sup>1</sup> Mr. Millais in all his experience has only once seen this species in Orkney.



Be this as it may, the Goshawk must be an extremely rare visitor there now, as we have no authentic record of its occurrence, except that mentioned by Gray, in his *Birds of the West of Scotland*, where at page 36 he says: "Mr. Stewart also states that he saw a living specimen of the Goshawk, in August 1866, on board the yacht *Chloë*, the owner, J. Rattray, Esq., having procured it in Orkney a short time previously."

Messrs. Baikie and Heddle say that this species is not abundant, though some few remain the whole year round.

Mr. Heddle of Melsetter says: "Very rarely observed. I never saw one. Indeed I cannot get an *authenticated* notice of one being seen by a person I could depend on for identification."]

### *Accipiter nisus* (L.) Sparrow-hawk.

Although most writers on the birds of Orkney, from Low down to Messrs Baikie and Heddle, record this as a common species, this is far from being the case. We ourselves never met with the bird during our residence at Westness in Rousay, where trees for roosting, and numberless small birds for food, should have proved great attractions. What is generally called the Sparrow-hawk in the Orkneys is in reality the Kestrel.

The true Sparrow-hawk does, however, occur, and more commonly than we at one time supposed. Mr. Moodie-Heddle writes us: "I killed one at Melsetter in 1870, which is the only one I ever saw in Orkney, or heard of. What is commonly called the Sparrow-hawk is the Kestrel."

One killed in 1887 at Smoogroo, on the Mainland, by Miss Flower, who has shot several, is now stuffed and in the possession of Mr. Cameron of Burgar. Mr. Reid tells us he has also killed the Sparrow-hawk in Orkney.

Mr. Spence tells us that he knew of one instance in which the eggs of this bird were obtained from the Head of Holland.

Mr. Ranken says he has often seen this species in the plantation of Muddiesdale, and has known it build in the same cleft of rock with the rock-pigeon, apparently both being on terms of good neighbourhood.

Mr. Irvine-Fortescue says he sometimes sees a small hawk

flying low and very quickly over the fields, and just topping the walls, but he never saw one near enough positively to identify it as a Sparrow-hawk.

Mr. Buchanan tells us he has shot several Sparrow-hawks, and affirms that they bred in the Muddiesdale plantation in 1886, from which nest he shot four young and one old bird. He has also shot them elsewhere with the down on.

### *Milvus iclinus*, *Savigny*. Kite.

"Gleds" are mentioned by Wallace as being common in Orkney, but it is more probable that he meant the Hen Harrier, as no one else seems to have met with this species until 1877. On April 24th of that year Mr. Reid informs us a Kite was shot at North Wa', Sanday, by J. Wilson, and was preserved by James Sinclair, Taxidermist, High Street, Kirkwall. This specimen passed into Mr. Petrie's collection, and afterwards into the possession of Mr. Whitaker. Neither Mr. Moodie-Heddle nor his father, whose experience extends over more than half a century, ever saw or heard of this species in Orkney.

Mr. Spence mentions that another Kite was shot in Sanday in 1878.

### *Pernis apivorus* (L.). Honey-Buzzard.

Crichton in his *Rambles in the Orcades*, p. 78, says: "Among other circumstances of the day, I met and obtained a very fine skin of the female Honey-Buzzard (*Falco apivorus*) shot rather earlier in the season." No locality or date is given, and we have no other mention of the species, which, however, might well occur on migration.

### *Falco* (*sp.* ?). Falcon.

It is impossible now to tell to which species the falcons mentioned by Baikie and Heddle belonged, as in those days Hancock had not pointed out the difference between the Greenland and the Iceland forms. To those mentioned above we have a note that the one kept alive by Mr. Traill of Woodwick was taken about 1831, and was the last seen (J. G. M.-H.). This probably refers to Hoy.

Since then Mr. Moodie-Heddle saw a "Jer-Falcon" on Oct. 15th, 1887, a notice of which appeared in an article in the *Field* of Oct. 22d, under the heading "An Autumn Day in the North of Scotland." Mr. Moodie-Heddle adds the note, "the first noticed in the south of Orkney."

Mr. E. S. Cameron of Bargar House says (*in lit.* 2d Jan. 1888), "Robert (Murison, General Burroughs' keeper on Rousay) tells me that he saw two 'Jer-Falcons' above Trumbland, and that he could not be mistaken."

Mr. Cowan also has the note, "a rare visitant."

### *Falco islandus*, *Gmel.* Iceland Falcon.

In one instance at least we are able to identify one of these white falcons. In 1874 an Iceland Falcon was shot in Orphir, and had a place in Mr. Petrie's collection. When this collection was broken up, this bird, with the Kite before mentioned, was bought by Mr. Whitaker of Rainworth, Nottingham.

### *Falco peregrinus*, *Tunstall.* Peregrine Falcon.

Orc. = *Puiligrün* (B. and H.).<sup>1</sup>

Wallace, at page 20 of his *Description of the Orkney Islands*, gives the following long list of the places in which these, in his day valuable, birds bred there:—"Hawks and Falcons have their nests in several places of these Islands, as in the Noup, Swendal, and Rapnes in Westra; at High Berrie and Aithhead in Wals; at Braebrate, Furcarsdale, and Rackwick in Hoy; at Halcro', Greenhead, and Hocksa in South Ronaldshay; at Bellibrake and Quendal in Rousa; at Rousum Head and Lambhead in Stronsa; in the Calf of Eda; at Gatnip, Gultak, Mulehead in Deirness; Copinsha, Black Craig of Stromness, Yeskrabie, Birsá, Marwick, and Costahead in the Mainland." Wallace also adds that "the King's Falconer comes every year and takes the young, who has twenty pounds Sterling in salary, and a Hen or Dog out of every house in the country, except some houses that are privileged." In a note sent us by Mr. Moodie-Heddle he says: "Hawk hen: an ancient right existed by which the

<sup>1</sup> "Puiligrün, I fancy, is only an attempt to repeat Peregrine, which some stranger had used in their (Orcadian native) hearing. I have once or twice heard it called 'The Blue Hunting Hawk.'"—J. G. M.-H.

king claimed a hen for his hawks from every 'reek' or house having a fireplace." Peregrines are still not uncommon in the islands, though they are no longer protected. Salmon saw a pair in Copinsay in 1831, which were breeding in the most inaccessible spot in the sea-cliffs there. This pair would most probably be occupying the same site as that seen by Low in the same island in 1774, as Peregrines, like eagles, keep to the same sites for, probably, centuries, unless constantly disturbed. (Vide *Ootheca Wolleyana*, vol. i. p. 99.)

A pair frequented the rocks on the west side of Rousay in 1883, although we could not discover their nest, and birds were seen throughout the year there. Again, in 1888 we were informed by the Rousay keeper that the Peregrines were again in the same place that season, but he could not find the nest. Mr. Moodie-Heddle tells us that he thinks only about a quarter of the number of Peregrines remain during the winter that are to be found at other times.

Mr. Spence tells us that in 1882 he paid a visit to Copinsay to try and get the eggs of the Peregrine, but was told by the man who makes a living by taking and selling eggs, that for some years back the birds had forsaken their eyrie there. Mr. Ranken, however, tells us that the Peregrine again nested in Copinsay in 1887, and they did so also in 1888 and 1889. On June 5th, 1886, Mr. Halcro told Mr. Fortescue that he saw a Peregrine fly out of some long heather on the steep south-west side of the Waulkmill Bay. On reaching the spot he found the apparent beginning of a nest, but it came to nothing. With this exception, Mr. Irvine-Fortescue never heard of one attempting to build in his neighbourhood.

Mr. Ranken says that the bird is still fairly plentiful in Orkney, and he has seen young birds that have been obtained on several occasions. Mr. Watt informs us they nest in Marwick Head.

Mr. Heddle tells us there are about four pairs breeding in Hoy; they are not disturbed, but get no more numerous in the breeding season. We saw one at Rackwick in June 1888, evidently nesting.

Mr. Monteith-Ogilvie informs us that the Peregrine is common about Papa Westray, breeding in the North Craigs of the holm;



and, on August 21st, 1889, that gentleman shot a young male that was carrying off a Teal he had just killed; he would not have fired at it, except to save his duck.

### *Falco subbuteo* (L.). Hobby.

[*Obs.*—Referring to Messrs. Baikie and Heddle's paragraph on the Hobby in their book, Mr. Moodie-Heddle says: "Much rarer than would appear from B(aikie) and H(eddle). I never saw one. My father saw one at Aikerness, Evie, about 1865. Mr. Ranken killed one on Wideford Hill, on October 25th, 1845, which was soaring over a grouse he had wounded." This is, no doubt, the one referred to by Messrs. Baikie and Heddle in their book.

Mr. T. Ranken tells us he has seen the Hobby flying on more than one occasion, its flight being more readily distinguished than that of the other hawks. The one, however, just referred to as having been killed by Mr. Ranken's father at Wideford, was, on investigation, found to be only a young and rather small Peregrine, so we think it still open to doubt if the Hobby has ever occurred in Orkney.]

### *Falco æsalon*, *Tunstall*. Merlin.

Writing in 1848, Messrs. Baikie and Heddle record this species as very common. Since then, however, it seems to have become rarer. Mr. Moodie-Heddle says it is not uncommon, but rarer of late years. One was sent to Mr. L. Dunbar, to be stuffed, by Mr. E. S. Cameron, Burgar, Evie, on September 2d, 1887, and to this there is the note, "not very plentiful in Orkney." We have eggs taken in Rousay in 1883, where they are resident, a few pairs breeding through the hill. They appear much more plentiful in the autumn, probably young birds bred in the neighbourhood, and some migrants as well. In Westness they used to haunt the garden in the evening, coming after the many small birds that roosted in the trees and bushes there.

Mr. Irvine-Fortescue says it is common during the autumn migration, but he has not heard of a pair nesting in his

neighbourhood for years. Mr. Watt tells us he sees Merlins daily.

In Hoy, Mr. Moodie-Heddle informs us there are only two or three pairs; we saw an old female there in June 1888. We also in the same season saw a pair of immature birds at the "Bow," in Westray, and none elsewhere.

Mr. Spence says he has "found this bird in greater numbers in Orphir and Firth than elsewhere. In the former parish it breeds on the grassy crags along the shore and on the slopes of the hills. In the latter its favourite nesting-places are the Keelie-lung Hills and the back of Wideford Hill."

Mr. Monteith-Ogilvie informs us that Merlins are common in Papa Westray, and that they breed there or in the holm.

### *Falco tinnunculus*, L. Kestrel.

*Orc.* = *Mousie Hawk*, *Wind Cuffer*.

From Low's time downwards the Kestrel seems to have been a common species, breeding indifferently in the sea-cliffs, in inland situations, and in old ruined buildings. One pair bred for many years back, according to Messrs. Baikie and Heddle, in the tower of St. Magnus Cathedral, Kirkwall, a fact that was noticed by Wolley.

The Kestrel remains the whole year round, and is probably the commonest resident hawk in Orkney, occurring in every island.

The Kestrel has become much rarer of late years in Hoy. We saw three at Melsetter, and also a pair at Waulkmill Bay on the Mainland, in 1888.

### *Pandion haliaëtus* (L.). Osprey.

Very rare. In a note by the late Mr. Heddle of Melsetter, he says: "I saw one actually catch a trout in Holm lake in 1850 (? 1848). J. G. H." The present proprietor of Hoy writes us: "I don't think these (Ospreys) have bred here within the memory of man. Indeed I know of no suitable building-place. My father saw one fishing at Holm loch, May 12th, 1848."

Mr. Irvine-Fortescue informs us he saw a pair of birds that he took to be Ospreys, in Hoy, in May 1864; they appeared to be hardly large enough for eagles.

### Order 3. **STEGANOPODES.**

#### Family **PELECANIDÆ.**

**Phalacrocorax carbo (L.).** Cormorant.

Orc. = *Palmer, Great Scarf.*

The Cormorant, though by no means an uncommon bird, is still far from numerous, and seems to prefer the west side of the islands to the east.



Mr. Watt says that with him Cormorants are numerous on his (west) side of the Mainland, but that he has never, to his knowledge, seen the Shag in the bay or about the Skaill rocks. On the other hand, Mr. Irvine-Fortescue observes that, on a visit to Copinsay in 1884, he only detected one Cormorant, though Salmon found them breeding there in 1831.

Buckley observed in Rousay that Cormorants were not nearly so numerous as the Shags, neither did they mix with those birds, nor herd together among themselves as does the Shag, except when breeding.

Mr. Moodie-Heddle says the Cormorant is called "Palmer" in Orkney. He fancies this is from the white spot on the thigh being like the shell worn by pilgrims. This spot he has seen, in some cases, at all seasons of the year. During our visit to Orkney in 1888, and while staying at Melsetter with Mr. Moodie-Heddle, we noticed that Cormorants had a regular line of flight from Longhope, on the one side of the island, to their breeding-places on the other, which varied slightly, according to the direction or strength of the wind.

Cormorants are generally local in their breeding-places, and their nests are, as a rule, higher up the cliffs than those of the next species. There is a colony on a small stack at Costa Head, when we could only detect one Shag on its nest, all the rest being the larger kind. All the nests into which we could see contained only three eggs. Many Cormorants were nesting on Roithisholm, at the south end of Stronsay, and some of the eggs we picked up on the top of the cliff, where they had been carried by the crows, were evidently quite fresh—this was on July 4th; . . . other nests, again, contained young birds nearly able to fly.

There is an interesting Cormorantry on the Seal Skerry off N. Ronaldsay which Harvie-Brown visited on July 2d, 1889, in company with Mr. Norrie, who took some excellent photographs of the birds on their nests; they were very tame, and allowed him to approach within a very few yards of them.

The following is from the *Field* of April 22d, 1882:—"Throughout Orkney accounts are being received of the tameness of the common and crested Cormorants, owing to want of



food. They feed chiefly on sillocks or young saithe, which are this year very scarce on our coasts. These birds in some places are so tame that they are coming up to the houses in the country and feeding with the tame birds. A gentleman walking out along the shore came upon two Cormorants and a Shag sitting up under a ledge of rocks. They seemed to pay no attention to him. He held out his stick, when the Shag gripped it, at the time making a hissing sound. He went up above them and forced them into the sea. But they seemed to be in a semi-conscious state, falling over and over before they managed to get to the water."<sup>1</sup>

Young Cormorants remain blind from a fortnight to three weeks after hatching.

#### *Phalacrocorax graculus* (L.). Shag.

Very abundant everywhere, breeding in most of the suitable localities, and collecting in immense flocks in the autumn in the bays and firths amongst the islands.

Shags nest in very low rocks, especially in the geös and caves, but they require to have deep water immediately underneath, into which they can drop at the approach of danger instead of having to fly overhead. Their nests are composed of seaweed, and we have often watched them carrying great streamers of tangle, which they dive for, to the rocks. They have the power of resting for a short time on the water with their wings spread out to dry.

Shags do not apparently breed their first year, nor do they assume the adult plumage then, as numbers of immature birds may be seen at the breeding season sitting on the rocks or fishing in the firths. Probably it was from their different plumages that Messrs. Baikie and Heddle founded their third species, but in a pencil note by Mr. Robert Heddle, one of the authors, he remarks that "in all probability *P. graculus* is a synonym of *P. cristatus*," from which it seems that he changed his opinion about this new species after the book was published.

<sup>1</sup> For another instance of Cormorants starving see under Grey Seal, p. 71.

*Sula bassana* (L.). Gannet.

Seen at most times of the year about the islands, but never at the breeding season, except at their nesting station of Stack or East Sulisgeir, and on their line of flight up and down the Pentland Firth.

Mr. Watt informs us that only a few Gannets are to be seen about Skaill, or at least that they do not come close inshore there ; though, during stormy weather, they frequent the more sheltered bays and firths.

For three successive years we have vainly attempted to land on the nesting station of Stack, but, from its formation, the least swell makes it impossible, or at least extremely dangerous, to attempt it, and a dead calm is a thing not often met with in the North Atlantic. Seen in certain positions and some distance off, the Stack reminds one of an iceberg, white as it is with the droppings of the Gannets.

During a visit made to the Stack by Harvie-Brown in July 1887 he made the following notes on the birds seen there:—

“A very large proportion of the Gannets were in the younger stages of plumage, a larger proportion, indeed, than I have ever noticed before at any other nursery. This tends to the belief that this station is *not* so persistently robbed, nor so regularly or so frequently visited and landed upon as others, such as Sulisgeir (West), which pays its annual toll of from two to three thousand birds. The glasses revealed a very considerable proportion of dark birds amongst the white ones ; and, on the wing, immature birds of the first, second, and third year were clearly distinguished, and almost constantly in sight.

“Considerable numbers of other rock birds, principally Kittiwakes and Guillemots, with a few Razorbills, occupied certain ledges and convenient cracks and crevices. Of Cormorants and Shags we saw none.”

Mr. Spence gives the following account of the curious capture of a Gannet :—

“In July 1863, while Dr. James Logie of Kirkwall was returning from visiting a patient in Harray, he succeeded in capturing a fine specimen of the Solan Goose in the following manner :

As he was driving along the Stromness road by the Bay of Firth, he was suddenly startled by the appearance of a huge white bird which kept swooping and dashing about the lantern of his gig. The night was very dark, and as the bird's screams sounded unearthly enough for anything, it was some little time before Dr. Logie ascertained the precise nature of his visitant. Presently he observed the bird alight in a deep ditch by the roadside, and getting out of his gig, he, with the aid of the lantern, so dazzled the bird that it was easily captured. A closer inspection showed it to be a remarkably fine specimen of the Solan Goose. The bird is now stuffed, and in Dr. Logie's possession."

#### Order 4. **HERODII.**

##### Family **ARDEIDÆ.**

##### *Ardea cinerea*, L. Common Heron.

Low describes the Crested Heron as common in the winter, but says he thinks it does not remain through the summer, its place then being taken by the Ash-coloured Heron; however, as the former bird is merely the Common Heron in full breeding plumage, and the latter the young bird, it is quite probable that this species bred in Orkney in his time.

Robert Dunn does not seem to have discovered its breeding haunts either, so it must have been very local (as in fact it is now), or very rare at that season; indeed, it is not generally supposed to breed in the Orkneys, but we have received many statements to the contrary.

Mr. Watt of Skail informs us that it breeds in Lyre-geö, sometimes called Heron-geö, between Skail and Stromness.

Mr. Irvine-Fortescue says: "I believe one once nested on the Black Craig, Stromness. I saw an egg which had been got there. They may nest yearly, but it requires to be confirmed. Small flocks of half-a-dozen or so have certain roosting-places, where they may be almost always found, as on the holm of Washister, loch of Harray, and Veness, Orphir, when not disturbed," etc. etc.

Mr. Ranken tells us they build in the cliffs in Sandwick parish, and that his father obtained young birds from that district.

Harvie-Brown found three or four pairs breeding at the Black Craig, in or about the year 1863, within some 6 or 8 feet of the summit of the cliff.

Mr. Moodie-Heddle writes that the Heron breeds in one locality in Hoy, and that every year a few nests may be found. At this spot the bird makes its nest amongst long heather and bracken at the edge of a cliff, where there are a few small birches and rowan-trees.

There is also a pencil note in a copy of Macgillivray by Mr. Heddle's father, that the Heron builds in Orkney in rocks, and gives Skaill, Hoy, and the island of Glimpsholm, as localities.

Mr. Moodie-Heddle continues: "I have no doubt that they (the Herons) may shift, but that they breed at all these places occasionally. At Pegal Head and Risa Little one may usually see about the same number any day of the year, *i.e.* from 30 to 50, according to wind and weather."

Mr. Reid notes that they did breed, or were said to breed, at the heads of Roithisholm, Stronsay, but we saw no Herons there in 1888.

Heron is abundant all through the Orkneys in winter; indeed, at any season, except when breeding, when they are *at present* scarce.

### *Ardetta minuta* (L.). Little Bittern.

We have no record of any other specimen of this species from Orkney besides the one given by Baikie and Heddle, as having been procured in Sanday in 1806.

### *Botaurus stellaris* (L.). Bittern.

[*Obs.*—In a MS. note on this species by the late Mr. Heddle of Melsetter, he remarks, "very doubtful" in Orkney; but his son informs us that he believes his father did kill a Bittern after this, about the year 1851.]

## Family CICONIIDÆ.

### *Ciconia alba*, *Bechst.* White Stork.

We have no further notes on this bird since Baikie and Heddle



wrote, when they mention that one was got in S. Ronaldsay in 1840.

Family **PLATALEIDÆ.**

*Platalea leucorodia*, L. Spoonbill.

On October 22d, 1859, Mr. W. Reid saw a Spoonbill in the "Peerie Sea," close to Kirkwall, which was fired at but not killed. He purchased one, out of five specimens that had been shot three days before on Shapinsay, for 2s. 6d.; they came after a north-east gale, and there were nine in the flock.

Speaking of these same birds Mr. Bryce M. Ranken says he saw two of those that were shot; one, a small specimen, had the irides red, the other ash-coloured.

Mr. Moodie-Heddle has a note that a Spoonbill was killed by his father near Kirkwall in 1861, and that he had it stuffed.

On October the 10th, 1889, four Spoonbills were observed at the loch of Burness, in Westray, and two were killed by local gunners living on the loch side. One of these was shot by Thos. Seater, Burnhouse, and is now in the possession of Mr. Peace, architect, Kirkwall. It is an immature bird; the ends of the primaries are grey, there is no occipital crest, and only a faint yellow tinge on the feathers on the front of the breast. The other was shot by Thos. Rendall, Longhouse. This bird was allowed to rot, as no one cared to have it.

For the foregoing particulars we are partly indebted to Mr. Monteith-Ogilvie.

Family **IBIDÆ.**

*Plegadis falcinellus* (L.). Glossy Ibis.

Mr. Ranken's father writes, under date September 17th, 1857:

"To-day I saw in Dr. Duguid's possession a specimen of this *rara avis*, shot in Orkney. Upon the head there was a semi-circle of dull white feathers, very narrow, extending from above each eye." The bird was shot by Mr. Hewison at the head of Work (? Waulk), near Kirkwall.

Order 5. **ANSERES.**Family **ANATIDÆ.****Chenalopex ægyptiaca** (*Gm.*). Egyptian Goose.

[*Obs.*—A bird of this species was sent to Mr. Small, of Edinburgh, for preservation. It was killed on the 19th of December 1863.

Mr. Small writes us as follows regarding this bird: "I looked over my books and found the Egyptian Goose belonged to Mr. Heddle of Hoy. He bought it out of a poulterer's shop here, who told him it was killed in Orkney. Mr. Heddle knew birds very well" (*in lit.* September 13th, 1888).

In answer to our inquiries, Mr. Moodie-Heddle tells us he remembers his father getting the bird, but that he does not think it was killed in Orkney. There were two or three killed about the same time in different places, and it was suggested they might have escaped from some private pond.]

**Anser cinereus**, *Meyer*. Greylag Goose.

From all accounts a very rare bird in Orkney. Mr. Reid writes us that in the storm of the winter of 1837-8 he shot two geese at Papdale, which he took to be of this species.

Mr. James Barnett mentions that he saw a small flock of the Greylag Goose in Sanday, in October 1878.

Some years ago Mr. Irvine-Fortescue was told that a flock of geese, supposed to be of this species, pitched near the hill of Kirbister, Orphir; and when we were at Swanbister in 1888, this gentleman showed us the skin of a bird of the year he had shot near there. It was one of a pair which pitched in a field some 200 yards from the house. He wounded it at the end of October 1881, and killed it a fortnight later.

Mr. Millais considers this species a rare spring visitor.

Mr. Harvey says that the Greylag Goose or Wild Goose occurs in Sanday during the winter.

On October 18th, 1889, Mr. Baikie of Tankerness killed a

Greylag Goose at that place, and Mr. Ranken, in a letter of the 23d of that month, says, writing of this specimen: "A single Greylag Goose visited the little loch where this one was shot, last season, for a few days early in March, and that bird was also a solitary specimen. It became so tame as to feed with the tame geese and ducks."

Speaking of geese generally, Mr. Watt tells us he has seen large flocks in winter, their favourite haunts in his parish (Sandwick) being Wasbister, by the loch of Stenness, and some low marshy ground by the loch of Voy. He has only seen a chance one or two at Skaill.

#### *Anser brachyrhynchus*, *Baill.* Pink-footed Goose.

Mr. Millais writes us as follows: "I have seen this goose twice on Loch Harray, and once shot one which fell some distance inland, but having left my dog at home that day, I could not find it, though I am sure it was this species, as I have killed a considerable number of them in the south."

This, so far, is the only instance of the occurrence of this species in Orkney that has come to our knowledge. We think that, owing to Mr. Millais' intimate acquaintance with wild fowl, there can be little doubt that the birds referred to were Pink-footed Geese.

Since the foregoing was written, Mr. T. S. Cameron informs us that the remains of a Pink-footed Goose were picked up by Miss Flower, near Swanbister; the bird had been pulled to pieces by Hooded Crows, but enough remained to identify the species.

#### *Anser albifrons* (*Scop.*). White-fronted Goose.

From recent accounts, quite the commonest of all geese in Orkney.

Mr. Irvine-Fortescue says this species is a regular winter visitant to the north and west of the Mainland, possibly passing on in severe winters. He further says: "I find very great difference in the amount of white round the base of the bill; some have almost none, others a good deal. They are extremely local, apparently keeping to the basins of the lochs

of Stenness, Harray, Boardhouse, etc. I have never seen it except in the neighbourhood of the loch of Harray." The same gentleman gives several dates on which he saw these birds, from 1884. He saw a flock during very severe weather in March 1888, at the loch of Harray, and remarks that the bad weather from the 9th to the 21st of February, when all the lochs except the loch of Stenness were frozen over, did not drive them away. The largest flock Mr. Irvine-Fortescue ever saw consisted of about fifty birds, their usual number being from six or seven up to thirty. A skin of this species in that gentleman's collection is of a remarkably light colour, almost that of an albino.

Mr. Cameron of Bugar House also informs us that the White-fronted Goose is very common about certain lochs in that neighbourhood, and he has shot many specimens. On one occasion he slightly wounded one of these geese, which he took home, and kept in company with some Grey-lag Geese, where we saw it in 1888. Mr. Cameron also saw an albino with a flock of ordinary-coloured birds, from which, however, it seemed to keep slightly apart.

This species stops until quite late in April, and on one occasion an egg was picked up on a long green point running out into a loch much frequented by these birds, which Mr. Cameron presumed had been dropped by one of them.

Mr. Irvine-Fortescue says the White-fronted Geese "are particularly local in their habits, every winter frequenting the same spots, and never seen far from their usual haunts. I can understand this in the Brent Goose, but the White-fronted feeds in new grass fields, stubble fields, and on newly-sown fields, all of which are found all over Orkney."

### *Bernicla brenta* (Pall.). Brent Goose.

Orc. = *Horra* Goose (Low).

In the *Statistical Account* of Orkney it is stated that this Goose only visits Deer Sound, Hoy Sound, and the Westray Firth, and no other part of Orkney.

Mr. Bryce M. Ranken obtained some Brent Geese from



Deerness in 1845 and 1848. On the 17th Feb. 1845 he saw seven in Scapa Bay, which allowed him to approach quite close.

Mr. T. W. Ranken shot one in Sanday in Sept. 1866, which is an early date for the occurrence of this bird.

The Brent Goose is a common but local species on the Mainland, Deer Sound being still its most noted haunt there.

Mr. Irvine-Fortescue has never seen or heard of this bird in Hoy Sound, "which," he adds, "seems an unlikely place, unless Messrs. Baikie and Heddle meant the adjoining bays. At Deer Sound I have never seen more than some thirty or forty in a flock."

Mr. Denison, of West Brough, Sanday, tells us that both this species and the Barnacle, though still found in Sanday, are much rarer than formerly. Mr. Harvey writes us from the same island: "The Brent Goose comes to Catisand in winter. One of these birds, in the spring of 1886, took up with our ducks and remained in their company, and fed as they did until January 1887, when it vanished one night. It was as tame as the ducks, and went with them in their house. A pair came hovering near for about two weeks in April 1887, but then vanished. I imagine that one of them was the one referred to."

### *Bernicla leucopsis* (*Bechst.*). Bernacle Goose.

Low mentions this as a spring visitor to Orkney. It occurs in Sanday, according to Mr. Harvey and Mr. Denison; and Mr. E. S. Cameron of Bargar has shot it there.

These geese occur also in Stronsay, as the Rev. Mr. Caskey of Orphir informed Mr. Irvine-Fortescue, and are regular autumn and winter visitants there; Mr. Irvine-Fortescue saw a skin of one in Mr. Caskey's possession.

The Bernacle does not seem to be a very common visitant to the Mainland. The first Mr. Irvine-Fortescue saw near Swanbister was at "the Ting," or Toy Ness, as it is sometimes called, on the 6th of May 1882, and he was told by a man who had a cottage there, that a pair had been about for some days. On the 7th of November of that year he saw four at

the same place, and shot them all with an ordinary 12-bore gun.

On another occasion, in Feb. 1887, Mr. Irvine-Fortescue saw three fly across the loch of Harray, coming from the east, and settle in a field. He fired a long shot at them, and one was seen for some time afterwards in the neighbourhood of the loch of Stenness.

Mr. Moodie-Heddle informs us that a Bernacle Goose was killed at Melsetter in 1857, and he himself shot another there in 1872.

### *Bernicla canadensis* (L.). Canada Goose.

Mr. M. S. Graeme, y<sup>r</sup> of Graemeshall, told Mr. Irvine-Fortescue that he saw three Canada Geese on the loch of Graemeshall in May 1883.

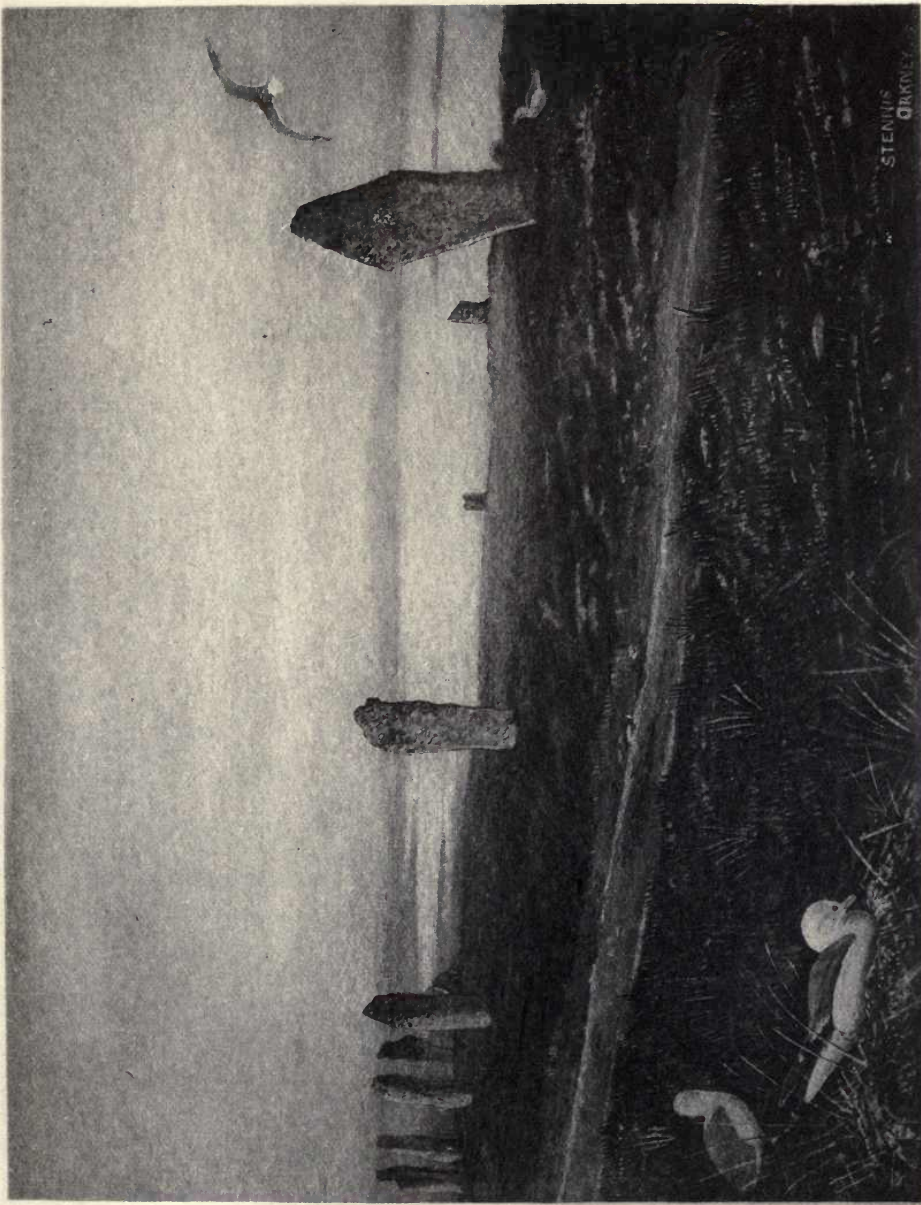
### *Cygnus olor* (Gmel.). Mute Swan.

Kept in a semi-domesticated state in two places, one being on Loch Saviskail, in Rousay, the other on Loch Skail in the west of the Mainland.

### *Cygnus musicus*, *Bechst.* Hooper.

Fea, writing in 1775, says: "Here also are several small holms (in Loch Stenness) where Swans were formerly in use to build with several other kinds of fowls; but to the eternal disgrace of some of our people, the eggs of the Swans were meanly taken away, and, as is alleged, basely sold to the southward for hatching for gentlemen's ponds. Thus that royal bird deserted the country." The author is clearly of opinion that such thieves were liable to a prosecution at the instance of his Majesty for thus trespassing on his prerogative; for the Swan is protected by royal authority, and it is no less than felony to steal or kill one of them (*vide* pp. 40, 41).

Speaking of the migration of geese and swans, Fea gives the following very interesting note. At p. 50 he says: "It is also remarked that the Swans and Wild Geese assemble with us in great numbers in the spring, when they are going to take their







flight. They announce their intention by their noise, and altogether set off in different flocks, seemingly under different leaders, and take an annual departure regularly, always making the Brough of Birsay, the westernmost point of high land, their Cape Farewel."

Shirreff, in his *General View of the Agriculture of the Orkney Isles*, published in 1814, carries the breeding of the Wild Swan down to a later date. He says that several pairs used to nest on the islands in the loch of Harray "until about twenty years ago, but being much annoyed about that time deserted the lake." If Shirreff is accurate, this would extend the date of the birds breeding there twenty years after Fea said they had given up doing so.

The Hooper is rare in the winter, but common in the early spring months, as late on as the first week in April. In the *Field* for April 17th, 1886, Mr. E. S. Cameron gives an account of the numbers seen by him, both on the Mainland and Rousay, and the localities they frequented, and from this it appears that this species outnumbers the next.

Both Mr. Ranken and Mr. Irvine-Fortescue talk of swans in much the same terms as above, and the former gentleman adds that, though often within shot, he never fired at these birds.

A large flock of Wild Swans arrived in North Ronaldsay on January 27th, 1881, the wind blowing from the west. They alighted on the shore, and were so exhausted that a man who saw them alight said the surf rolled some of them over. They soon recovered, and flew over to a fresh-water loch, where they made themselves at home, and, by being kept perfectly quiet and unmolested, got so tame, that Dr. Traill, on whose property they were, being out one day with a retriever when some of the Swans were feeding on the bank, instead of flying away in a hurry, they merely swam into the water, when he and his dog stood looking at them.

On October 25th, 1887, Mr. Irvine-Fortescue saw six swans, two white and four grey birds, passing in front of his house from S.S.W. to N.N.E. They seemed as if about to alight on the shore, but changed their minds and continued their north-easterly course.

Mr. Harvey writes us that swans occur annually in winter in Sanday.

Mr. Watt says that the loch of Skaill is a favourite nesting-place for swans on their journey north and south, it being in their line of flight. At one time, in 1886, there were between 50 and 60 on the loch; there had not been so many together on the loch since 1857, when Mr. Watt's grandfather counted between 70 and 80 at one time. Mr. Watt further says:—

“It was most interesting to watch them on the wing, and their graceful movements on the water, and to hear the ‘Hoop, Hoop’ and bugle-notes of welcome as each small lot of their friends approached, and, when they alighted, gathered round them bowing, and going through all sorts of elegant movements, and making melodious sounds. We have a few tame Swans on the loch, which the wild ones gather much confidence from. I could approach them within 60 yards, but on the appearance of a stranger they made off.”

On the loch of Skaill is a Hooper that has been there for a long time, some injury to the wing preventing it from leaving. We saw it there in 1889.

### *Cygnus bewicki*, *Yarr.* Bewick's Swan.

Probably in former years not distinguished from the preceding species. We have a note of one from Hoy in 1850, which is probably the earliest one identified.

Mr. E. S. Cameron of Burgar has recognised this species on the loch of Hundland in 1885, and he shot a male on April 3d of that year.

On March 1st, 1888, Mr. Irvine-Fortescue saw three Bewick's Swans arrive on the loch of Harray; they came from the south-east. “In this case,” adds that gentleman, “I am certain of the species.”

### *Tadorna cornuta* (*Gmel.*). Sheldrake.

*Orc.* = *Sly Goose*.

A common species in Low's time, and he remarks that they go elsewhere during the winter. They are much more numerous

in the North than the South Isles, generally building in rabbit-burrows, though the Rousay keeper reported to us in 1883 that a Sheldrake had its nest under a large overhanging bunch of heather, above a fresh-water loch some distance from the sea.

Mr. Moodie-Heddle says he once watched a Sheldrake coming out of a rabbit-burrow where she had her nest, and noticed that she dragged her spread-out tail over the sand at the mouth, most likely to prevent her tracks from being seen.

The same gentleman informs us they make good pets, but are so fond of strawberries that it takes some ingenuity to keep them away from the beds, once they have found them out.

They seem, from what we have been told, to be very courageous and pugnacious, one that the late Mr. Ranken had, tame, having lost an eye in a fight with a barn-door cock.

Mr. Irvine-Fortescue says they are very rare in the neighbourhood of Swanbister, never more than two pairs at most being seen there; he heard of a nest at Waulkmill Bay.

During our visit to Orkney in June 1888 we found Sheldrakes very abundant through some of the North Isles, nowhere more so than on the island of Sanday; they were rare, or absent, through the Westray group and N. Ronaldsay.

They now seem more inclined to remain the winter through than in Low's time, and Mr. Harvey, in a letter from Sanday, 28th of January 1888, writes us that Sheldrakes have been there for two or three weeks. Mr. E. S. Cameron of Bargar has also shot these birds there, in February 1886.

### *Anas boscas*, L. Wild Duck.

Orc. = *Stock Duck*.

Common and resident, receiving large additions to its numbers in the winter. The Wild Duck is one of those birds that suffer greatly from "egging," and also the advance of agriculture. They much frequent the smaller holms in winter, being almost undisturbed in such situations. We have often noticed, when watching a flock in winter, that the individuals composing it seemed all paired. The mallard moults first, the duck apparently being able to use her wings as long as the young need her care.

*Chaulelasmus streperus* (L.). Gadwall.

Mr. Irvine-Fortescue tells us that he, on one occasion only, came across this bird in Orkney. On December 4th, 1880, he saw a flock of six or eight on the loch of Harray, near the standing stones of Stenness, at the holms of Wasbister. He "set up" to them in his gunning punt, but they took alarm before he was well within range, and he only got three; he never saw the rest again, though he went to look for them. The gizzards of those obtained only contained a few stalks of some water plant. We saw the skin of one of the above-mentioned birds in that gentleman's possession.

Mr. Watt informs us that the Gadwall is a winter visitor, and is to be seen occasionally, in pairs, on the loch of Skail.

*Spatula clypeata* (L.). Shoveller.

Besides the instance recorded by Messrs. Baikie and Heddle, Mr. Moodie-Heddle of Melsetter informs us that he shot a Shoveller at that place in 1873, and has several times seen them; and Mr. Millais says that several have been shot in the North Isles, especially in Sanday.

*Querquedula crecca* (L.). Teal.

Fairly numerous, and breeds in several of the islands, as at the lochs of Skail and Tankerness on the Mainland, and on Sanday. It was by no means common in Rousay, nor did we note it as breeding there in 1883, though Mr. Reid, S. Ronaldsay, tells us he has seen Teal's eggs taken from the head of the burn which flows past Trumbland House.

*Querquedula circia* (L.). Garganey Teal.

From the little information we have of this species it must be a very rare bird. In a pencil note by the late Robert Heddle, it is stated that one was killed in Sanday in March 1820 by Mr. Strang.



*Dafila acuta* (L.). Pintail.

This seems to be a very rare species on the Mainland. The only occasion on which Mr. Irvine-Fortescue (who is a capital field-naturalist, and a keen wild-fowler) observed it, was at Swanbister on May 20, 1888.

Mr. Harvey says it occurs, perhaps not uncommonly, in Sanday during winter, and when there in July 1888, we picked up the remains of a drake, the wings being quite perfect.

Mr. Watt tells us he has seen Pintails on the loch of Skaill in March, but never during the breeding season.

On the 2d of February 1885, a Pintail was sent from Kirkwall to Mr. Small of Edinburgh for preservation.

Mr. E. S. Cameron has an adult male in his collection, which was shot by moonlight on February 27th, 1888, at the loch of Quanterness by Mr. M'Cree of Kirkwall, a most enthusiastic wild-fowl shooter.

*Mareca penelope* (L.). Widgeon.

A common, but local, winter visitant, at least on the Mainland, where their great haunts are the lochs of Stenness and Harray; here they occur in flocks of from 100 to 200. Mr. Irvine-Fortescue says the Widgeon arrives soon after the middle of October; he has seldom seen it on Kirbister Loch, in Orphir parish, and then only three or four at a time. At Swanbister they are irregular in their numbers and times of visiting that place; they have been seen there in September, and once as many as eighteen together; in the winter of 1886-7 they were almost entirely absent.

Mr. Watt has only seen a few at a time on the loch of Skaill.

Mr. Moodie-Heddle informs us that they breed every year in Hoy, and have done so for some time back. He says: "At one small loch my shooting tenant kills usually seven or eight brace on the 1st of August. Baikie and Heddle were not aware of this, and perhaps the Widgeon did not then breed here."

This is the only place known to us, as yet, where the Widgeon breeds in Orkney.

At times these birds are very abundant, so much so that Dr. Rae, of Arctic fame, once shot thirty-four with a small breech-loading 14-bore gun in one night at "flight." We saw a Widgeon drake in full plumage on the loch of Skaill on 11th of June 1889.

### *Fuligula ferina* (L.). Pochard.

A common and regular winter visitor, some years appearing in vast numbers on the lochs of Skaill and Stenness. Besides the Mainland, we have notes of its occurrence in Sanday and Rousay, and doubtless it appears in winter in all suitable localities. Pochards appeared on the loch of Kirbister, Orphir, at the beginning of, if not before, September 1883, and one apparently haunted that loch all that summer.

In 1883 Buckley saw four drakes on Loch Wasbister, Rousay, during June and July, but only one remained until August, when it was shot, and appeared to be a "pricked" bird, unable to fly; there were no ducks with the drakes. A few birds appeared again in the autumn.

Mr. Watt writes us from Skaill: "Several large flocks (of Pochards) are to be seen during the winter on Stenness and Skaill. In the summer of 1884 I noticed about a dozen on the loch; three or four could fly, the rest could not. In August I took my boat, and went after them along with a friend. He succeeded in shooting a few. At the time I thought they were moulters, but since think they may have been flappers, the young of some weak or wounded birds that were unable to migrate with their flocks. I never heard of the Pochard breeding here; if so, I think it is from force of circumstances, not from choice."

With all due deference to Mr. Watt, we think that the Pochard might well breed on Loch Skaill, which is kept as quiet as possible, and is well adapted to the requirements of the bird; and from what we are told it is very probable the Pochard breeds in other lochs in the neighbourhood as well.

On the 12th of June 1888 we saw a male Pochard in fine plumage on the loch of Skaill; the day was so windy, it

was almost impossible to hold the glass steady enough to distinguish the different kinds of fowl, of which there were many, on the water.

Mr. E. S. Cameron informs us that Pochards begin to arrive in the end of August, and that larger flocks of them are seen than any other duck. Their favourite localities are the loch of Boardhouse on the Mainland, and Bay Loch, Sanday.

### *Fuligula marila* (L.). Scaup.

A winter visitor; not plentiful in Sanday, according to Mr. Harvey.

On the Mainland it appears to be very common from all accounts, appearing in hundreds on the loch of Stenness. On the loch of Harray, however (which is really the northern division of the same sheet of water), Mr. Irvine-Fortescue informs us he has scarcely seen any, and never more than half-a-dozen or so in a flock; they seem to be shifty birds, as the same gentleman tells us at times scarcely one is to be seen, even in Stenness. Mr. Irvine-Fortescue also adds that he saw what he took to be a bird of this species on the loch of Rango in summer about the year 1883, probably a pricked bird. In other parts of the Mainland the Scaup appears in small flocks.

On August 28th, 1888, Mr. Cameron informs us that he saw a small lot of Scaup on the loch of Scockness, a small, secluded loch, fringed and half-covered with water-plants, in the island of Rousay. The birds were very tame, but he could not ascertain whether the party consisted of birds bred on the spot, or were merely early arrivals. There seemed to be two pairs with their young, and the old drakes were already in full plumage.

### *Fuligula cristata* (Leach). Tufted Duck.

A common, though not an abundant, winter visitor to Orkney. In Sanday Mr. Harvey remarks that they are very shy.

On the Mainland, the lochs of Harray and Skaill are a resort of this species, and they also occur in the "Peerie Sea," near Kirkwall.

In Rousay, Buckley saw a male Tufted Duck along with two Pochard Drakes on Loch Wasbister on June 16th, 1883, and on the 28th of August he shot a female. They were common enough there in the winter, and seemed fonder of the fresh water than the other species of ducks.

Mr. Millais has found the Tufted Duck breeding in Orkney. In July 1888, thinking it possible that this species was breeding on a loch, he took a boat to land on a grassy island. On approaching it, a duck with white-barred wings and *white face* flew off, and circled round the boat within forty yards. After landing he found the nest, containing two young, just hatched, and two addled eggs.

#### *Nyroca ferruginea* (Gm.). White-eyed Duck.

[Obs.—Messrs. Baikie and Heddle say this duck has been observed in Orkney, though rarely, and one of the authors, the late Mr. Robert Heddle, had a note of one killed in 1854—a female. In the absence of any more satisfactory records we enclose it in brackets.]

#### *Clangula albeola* (L.). Buffel-headed Duck.

[Obs.—Referring to the specimen mentioned by Messrs. Baikie and Heddle, we have received the following note: “Buffel-headed Duck. This is a mistake; the skin came from Dunn, and was not even killed in Great Britain.”]

#### *Clangula glaucion* (L.). Golden-eye.

A common winter visitant, according to all our correspondents, and our own observations are to the same effect. Mr. Irvine-Fortescue writes us that they are terribly shy of a punt, and so restless that other ducks are not alarmed when they rise. Mr. Crichton, at p. 44 of his *Rambles in the Orcades*, mentions seeing a pair of these ducks on the loch of Stenness on June 5th, 1860.

Regarding the plumages of the Golden-eye, Mr. Millais informs us that he has never yet seen or shot a bird in the



second or third year's plumages in Orkney, though they are not, in the former, very rare in Scotland generally. He adds that the birds in the third year's plumage are always rare, and he has only killed two males in that state.

On June 11th, 1889, we saw three Golden-eyes, apparently young males, on the loch of Skaill, and Mr. Watt informed us that they had been there all the season.

### *Cosmonetta histrionica* (L.). Harlequin Duck.

[*Obs.*—We have nothing to add to what Messrs. Baikie and Heddle have already written on this bird; but, knowing how rare it is, and how very unsatisfactory the evidence regarding the specimens referred to this species has turned out, we keep it in brackets until some better-authenticated example occurs.]

### *Harelda glacialis* (L.). Long-tailed Duck.

*Orc.* = *Caloo*.

A very common species in winter. Mr. Moodie-Heddle tells us he has seen several in July, and many now remain until May.

Mr. Irvine-Fortescue says a few Long-tailed Ducks frequent the loch of Stenness in small flocks, never above a dozen. He has also seen a few immature birds in Harray, but never an adult.

Mr. Millais informs us that when this species is assuming its breeding dress it becomes exceedingly wild, and it was several years before he himself could obtain them in that plumage.

*Obs.*—In Mr. Salmon's Diary of a visit to Orkney, under date of June 12th and 13th, 1831, we find the following note:—

“We found a nest which we have every reason to believe belongs to the Smew (*Mergus albellus*); it was close to a small loch in the parish of Burness (island of Sanday). We put the female off her eggs and after flying round two or three times, she alighted in the loch, and although we could not get near enough to shoot her, yet we could distinctly perceive that it was what is figured by Bewick under the name of the Lough Diver or female Smew by the formation of its bill. The nest contained eleven eggs, rather larger than those of the Teal (*Anas crecca*), but very similar as to shape, the colour quite white. It (the nest) was composed of moss and lined with feathers and down.”

We insert this here, as we have good reason and good authority for supposing this nest to have been that of the Long-tailed Duck, and we thus notice it as a guide for future observers. Certainly it would be more likely, from what we know of the habits of the two birds in other countries, to have been that of a Long-tailed Duck than a Smew.

### Somateria mollissima (L.). Eider Duck.

Orc. = *Dunter*.

As this is a species that is rapidly spreading all along our west and north coasts, we have entered more fully into its history than might otherwise have appeared necessary.

Wallace in his *Description* says: "Here is plenty both of wild and tame fowls—Dunter Goose"—but gives no exact localities.

Low in his *Tour* mentions that he saw numbers of Eider Ducks swimming about near the Calf of Flotta, and that, although he was too early for eggs, yet he found several of the nests of the previous year, with the down still remaining in them, as the inhabitants made no use of it. On Hunda he says that the "Dunter" *sometimes* builds there, but he seems not to have met with this species elsewhere in his *Tour*, or at least does not mention the fact.

Barry, in his *History of Orkney*, page 294, says: "THE EIDER DUCK. It is our Dunter Duck, and frequents all our sounds and bays in winter, and leaves us in the spring, with the exception of a few that breed in the holm of Papa Westray, where they form their nests of seaweed, and pluck the rich, soft down from their own breasts to line them."

In the *Statistical Account of Orkney*, page 88, it is stated: "It remains in Sanday all the year, and breeds there."

Dunn, in all the places where he mentions this bird, seems to consider it as rare, commoner in winter than in summer, "*a few pairs*" remaining to breed.

Mr. B. M. Ranken mentions that he saw "a flight of eight birds, consisting of the parents and six young ones to-day (May 30th, 1845), at Carness. Five of the young were males in somewhat different stages of plumage, well feathered, and almost as large as their parents. Dr. Duguid was with me."

This is an extremely early date for young birds to be well enough grown to show such difference in plumage.

Mr. Irvine-Fortescue writes us as follows: "I have seen a pair or two with young ones in Swanbister Bay, but not for a year or two. They are more numerous along the Hoy and Walls shores of Scapa Flow and among the north isles. I have seen a nest among the heather, fully 200 yards from the nearest water (a small loch), and half a mile from the sea, and about 100 feet above sea level. Eiders (I have an idea) do not lay above three eggs at a time."<sup>1</sup>

Mr. E. S. Cameron, of Burgar House, sends us the following interesting notes, which we here reproduce in full: "The Eider has increased very largely during the last few years, and I attribute this to the better protection afforded to their eggs (a favourite food of the crofter and fisher classes), by the proprietors of the smaller islets and holms, such as Eynhallow and Damsay, this latter belonging to the Scarths of Binscarth."

"With regard to Eynhallow, the following facts speak for themselves. Previous to my purchase of the island in 1884, I never saw more than two or three broods of young Eiders about its shores, the first eggs laid there being invariably taken by fishermen and others. In 1884 I set to work to preserve the island strictly, and engaged a man, James Wood, to reside there during the nesting season. One dark and stormy night the house he lived in was pulled down and the furniture thrown into the sea. Wood was fortunately absent at the time getting provisions. In 1887, there were 200 Eider Ducks' nests on Eynhallow, and the number of broods hatched out was 190. The greatest number of eggs seen by me in one nest was ten, the average number of the clutch being four or five."

"I have seen three nests in a space of a yard in circumference. When the young of the Eider are all hatched she carries them to the sea upon her back, and this she has been seen to do by William Wood, farm bailiff, and James Wood, my watcher on Eynhallow. When staying, during Christmas 1886, with General

<sup>1</sup> Three to four is a very usual number in the Outer Hebrides (see *Fauna of O. H.* p. 108). Nine have been found (*op. cit.*), and five is common in the Inner Hebrides.—J. A. H.-B.

Burroughs, of Rousay, we saw from the dining-room window over a thousand Eiders in Viera Sound."

"On 10th October 1887, Flower and I went to shoot rabbits on Eynhallow; we then counted nearly a thousand Eiders on the north side of the island."

"During the summer we frequently observe Eiders (females in every case), upon the mill-dam of the farm of Burgar. I have often seen Eiders (ducks in every instance), on fresh-water lochs, a mile and more from the sea."

"In the throat of an Eider Duck skinned by Flower was a whelk shell measuring an inch and a half long and three quarters of an inch broad."

"William Wood has been most successful in hatching out young Eiders under domestic ducks. They did well upon the same food as that given to the mothers, but invariably drifted out with the tide and regained their liberty, when about seven or eight months old. They did not show any black or white in their plumage during the first winter, and the repeated examination of young males has convinced me, that they moult into their first nuptial dress in the second autumn. The blending of the black, white and brown of birds of the year differs considerably in individuals of the same age."

"I am guiltless of having often fired at Eiders, but upon one occasion, on February 18th, 1886, while cruising round Sanday, I fired a heavy shoulder gun into a large flock, specimens being required for friends. Six were stopped by the shot."

In 1883 we found Eiders abundant round the east end of Rousay and the holms adjacent thereto, both during the breeding season and in winter. During the moult, a large flock of males frequented the sound between Viera and Gairsay and the Mainland, apparently unable to fly, as, on a rifle ball being fired into their midst, they merely dived.

In 1888 we found the Eider abundant in many of the islands, especially the smaller holms. On the estate of Tankerness were the remains of Eider Ducks' nests more than two miles from the sea. We saw very few about Sanday, and none about the Westray group or N. Ronaldsay. They seemed most abundant on the islands of Damsay and Eynhallow, and on Linga Holm, near Stronsay.



Mr. Watt tells us the Dunter is rare in the neighbourhood of Skail.

Mr. Moodie-Heddle mentions that, after the young are hatched, the drakes go out to sea, and this is what the Orkney fishermen all declare is the case.

In the throat of a male Eider shot by Mr. Millais he found a "Razor-fish" five inches in length. He also goes on to say that the barren hens in the summer assume a very curious dark form of plumage, which he has not noticed except in the breeding season. Up to the first week in July, the same gentleman says, the old males may be seen sitting about everywhere on the shore as tame as barn-door fowls, but that a week afterwards not one is visible, they having gone northward to the great bay between Sanday and North Ronaldsay, where they stay for a fortnight until they have assumed their curious sleek plumage and new wing feathers. They then migrate north to return again in October in small numbers, which gradually increase till the following spring.

The young birds of the year are not common, though one will occasionally see a flock of them, but the second and third year's birds are very scarce, adults being most conspicuous.

We only saw one Eider about Papa Westray and the holm in the summer of 1888, but Mr. Monteith-Ogilvie informs us that he saw numbers there in the autumn of 1889.

### *Somateria spectabilis* (L.) King Eider.

No one, as yet, has been able to corroborate Bullock's statement that this bird breeds in Papa Westray, where, in June 1812, he took a nest with six eggs.

The bird itself, however, has been obtained on several occasions, as mentioned in Baikie and Heddle's book and in the fourth edition of *Farrell*.

Besides these instances, Mr. E. S. Cameron of Bugar shot an adult male in March 1884, which he sent to Mr. Dunbar, Thurso, for preservation.

Referring to Mr. Bullock's statement just mentioned, Mr. Monteith-Ogilvie writes us as follows: "I am not quite so sure . . . that the King Duck has not bred in Papa Westray."

"I was assured by one, Andrew Burgas, some time the shepherd to Mr. Traill of Holland, on asking him what birds came here, that there was another kind of 'Dunter' (Eider) came here (which he described and also recognised by Yarrell's picture as the King Eider), and that he had on two occasions found the nest on the holm within recent years. This he told me without any prompting on my part, but of course the statement, as it stands, is of no value. I will make full notes of this before I go, and send them on that you may see if you think the evidence is worth anything" (*in lit.* 8/12/89).

We give the substance of these notes as follows: "Andrew Burgas, the before-mentioned shepherd, says that a pair of 'Dunters,' the female of which was smaller than the common Eider, and the male of which 'had a red knob on his neb,' and was also smaller, bred for two consecutive years (somewhere in the seventies) on the holm; one year the nest was taken and the eggs eaten, the second year it was not interfered with. Since then he has not found the nest. Mr. Monteith-Ogilvie, having a copy of Yarrell with him, showed Burgas the picture of the Common Eider, covering the title, he said, 'Oh, no, that's the common dunter.' He next tried him with Steller's Eider, but Burgas said he 'never saw one like that.' Lastly he showed him the King Eider, turning over the leaves rather quickly, but Burgas stopped him at once and said, 'that's the very bird.'" As Mr. Monteith-Ogilvie very wisely remarks, all this may have been got up from some one else who had been inquiring about the King Eider, but we have thought it best to place this imperfect information on record for future and further observation.

### Ædemia fusca (L.). Velvet Scoter.

Orc. = *Velvet Duck*.

This bird is not mentioned by any of the earlier writers, Dunn being apparently the first person to record it from the Orkneys. It is a common winter species in many parts of the islands, notably in Damsay Sound and the adjacent waters. It does not, however, occur in Sanday, according to Messrs. Harvey and Denison.

Mr. Irvine-Fortescue remarks that this bird remains about Swanbister Bay almost, if not quite, the whole year round.

Mr. Millais informs us that this species occurs very numerous round the islands of Cava, Risa Little, Fara, and Flotta, but mostly *old males*, the females not being in greater proportions than one to two of the former; young birds of the year are very rare, he having only shot one, a young male. Mr. Millais has observed them in June, and on August 2d, 1888, he killed an old male that was moulting his pinions, the feathers round the fore part of his face were grey, the rest of the plumage normal.

Mr. Monteith-Ogilvie writes us that after leaving Kirkwall he saw no Velvet Scoters about Westray, Papa Westray, or Sanday.

### *Ædemia nigra* (L.) Common Scoter.

A very rare bird in Orkney, and not mentioned by any of the earlier writers down to Dunn.

Mr. Moodie-Heddle tells us he has never seen a single specimen of this bird in Orkney: his father saw them in Longhope in 1857, and notes them as rare.

Mr. Ranken writes that, in April 1844, his father found a dead bird of this species that had been washed ashore on the sandy beach which connects Deerness and St. Andrews, and that that was the only one he ever saw in Orkney.

Mr. Irvine-Fortescue informs us that a few frequent the Swanbister bay in winter, but he never saw more than six or eight in a flock.

The late Mr. Robert Heddle had a note of one killed in Sanday in 1849, but it must be rare there as elsewhere, as neither Mr. Denison nor Mr. Harvey has sent us any notice of it.

Mr. Millais has only seen two Common Scoters in Orkney, one near Fara, and the other in Græmsay Sound; the latter he unfortunately lost after wounding it.

We saw a fine adult male in Inganess Bay, near Kirkwall, on May 26th, 1888.

*Œdemia perspicillata* (L.). Surf Scoter.

Although not as common as Messrs. Baikie and Heddle's work would lead their readers to suppose, yet this species seems to have occurred on several occasions.

Mr. Ranken's father saw three on one occasion when crossing from St. Mary's to St. Margaret's Hope in March 1845; they were too wild to allow him within shot.

Mr. Moodie-Heddle tells us a Surf Scoter was seen in Longhope in September 1847, and his father saw four at the same place on October 16th, 1857. Mr. Moodie-Heddle himself has seen three specimens at various times among Velvet Scoters, but never tried to kill them.

Many have been recorded in the *Field*, and we cannot do better than quote, *in extenso*, what has been written about these later Orcadian occurrences in the 4th volume of the 4th edition of Yarrell, pp. 482, 483:—

“In the Orkneys, however, it seems to be of frequent and perhaps annual occurrence, from autumn to spring, although never in great numbers. An adult male was shot at Swanbister, in the parish of Orphir, in March 1866. One—perhaps the same specimen—was in the collection of the late Joseph H. Dunn, and another, which was doubtless killed in the Orkneys, is in the local museum at Stromness. Captain Clark-Kennedy has recorded, in the *Field* of March 11th, 1876, one obtained off Hoy Island in 1872, and another at the entrance of Loch Stenness, Stromness. In the same paper, under date of 18th of March 1876, Dr. Rae remarks: ‘In the latter part of September, or during October, I have seen one or more in Orkney for the last ten years in the large bay which separates Kirkwall from Firth and Rendall.’ In February 1875, Mr. T. M. Pike, when staying at Stromness, got close to, and fired unsuccessfully at, a Surf Scoter which was swimming with three Velvet Scoters in the Sound near Ryssa Little, and exactly a year later he killed at the same place, and in similar company, a fine adult male (*Zool.* 1879, p. 336). The Rev. S. A. Walker informs the editor that, on the 23d of October 1880, he obtained an adult male off the above-mentioned Ryssa Little, the trachea of which



was described by Mr. Herbert Langton (*Zool.* 1881, p. 59). On the 20th of November 1884 Mr. Walker saw, but did not obtain, another male of this species swimming in the same waters in company with Velvet Scoters. This bird was very tame, but, owing to the wildness of its companions, it could not be approached, although generally the last to leave the water and the first to drop."

From these remarks it will be seen that the Surf Scoter can scarcely be called a very rare bird in the Orkneys, and that it should be looked for amongst the Velvet Scoters.

### *Mergus merganser*, L. Goosander.

Not a common bird. Mr. Moodie-Heddle writes us he has only seen one or two; one was killed at Westness in 1850.

Mr. Irvine-Fortescue has never seen it, to his knowledge, in Orkney, while Mr. Reid says it is a regular winter visitant, leaving very early in spring.

Mr. Watt says they have been shot on the loch of Stenness, and he now and then sees them in winter on the loch of Skaill, as a rule single birds, though one remained, in 1889, until rather late in the season.

Mr. James Barnett, Crown Chamberlain, informed Mr. Spence that a specimen of this bird, subsequently in Mr. Petrie's collection, was killed by Peter Copland at Carness in December 1874. Mr. Barnett added: "I fancy this bird is very rarely seen in Orkney. I have not heard of another specimen."

Mr. Millais also considers this a rare species in Orkney, though in the winter of 1884-5 he saw several.

### *Mergus serrator*, L. Red-breasted Merganser.

Orc. = *Harl*, *Hareld* (Low).

Common and resident, breeding in most of the islands and holms.

Mr. Harvey, however, considers that it leaves Sanday during the nesting season.

Mr. Irvine-Fortescue tells us that a nest was found by Dr. H. H. Johnston on a ledge of rock on Hobbister cliffs some 30

feet above sea-level ; he also says he has known authentic cases of nests being found not far from high-water mark. Mergansers are often seen in flocks of from twenty to thirty.

### **Mergus albellus, L. Smew.**

The late Mr. Robert Heddle had a note that the Smew is at times common in Hoy Sound. Mr. Moodie-Heddle of Melsetter writes us that he killed a male in fine plumage in the Oar Burn, Longhope, in the winter of 1870, when shooting in company with the late Mr. M'Donald, of the National Bank, Kirkwall, who got the specimen for preservation.

Mr. Begg, Stromness, had a Smew sent him from Walls in 1853, and a year or two after he shot another near the Bring, in Hoy.

## Series SCHIZOGNATHÆ.

### Order 1. **COLUMBÆ.**

#### Family **COLUMBIDÆ.**

### **Columba palumbus, L. Ring-Dove.**

Somewhere in the forties of this century, the Wood-pigeon began to make its presence known, both on the Mainland, and, according to Messrs. Baikie and Heddle, on Sanday, though from this latter island we have no further instances of its occurrence since they wrote. Buckley saw two in Rousay in 1883, but they did not stay to breed, one disappearing before the other.

Of its increase in the Mainland we have full accounts from our correspondents.

Mr. Ranken says it was very rare there up to 1845, when his father had only seen two specimens ; another was killed by him in 1846, and another on April 1st, 1848, since which date they have become much commoner. It is now a permanent resident, and Mr. Ranken has often found its nest. About twenty are usually to be found at Muddiesdale, and Mr. Ranken has seen fully a hundred birds there in a flock. They

nest in his garden, and he is inclined to think they do so occasionally in the cliffs, as he has seen them fly out of the rocks during the nesting season with the Rock Pigeons.

Mr. Irvine-Fortescue fancies that they first nested at Muddiesdale somewhere about 1867, and since that date he has seen a bird or two at Swanbister almost every summer. One Sunday morning, about October 1883, he counted one hundred and fifty from his windows. The flock must have numbered about two hundred sitting on the bushes and walls. About 11.30 A.M., on opening the front door, the gravel walk was covered with them; he did not disturb them, but on his return from church they were gone, and he saw no more of them. Dr. Logie told Mr. Irvine-Fortescue he thought a pair nested in 1887 on a steep bank of a burn in Redland.

Mr. Moodie-Heddle tells us the Wood Pigeon sometimes breeds at Melsetter; they are common in the autumn. We observed only one Wood Pigeon in Orkney in 1888, and that was on the 29th May at Melsetter. In 1882, however, we saw three together in June in the Muddiesdale plantation, but could not find a nest.

### *Columba livia*, *Bonnat*. Rock-Dove.

Common everywhere, breeding in all the cliffs and rocks of the sea-coast. Mr. Moodie-Heddle tells us that their routes of flight by the cliffs, where there is an exposed beach, varies higher or lower with the tide. In windy weather they have to tack to windward, and a person knowing the proper spots may have very fair flight-shooting.

Varieties of the Rock-Dove are common, and although by some authors these are supposed to be stragglers from dove-cotes, we are inclined to think they are really wild birds; nor is it in any way surprising that this should be so, when all the wonderful tame varieties are known to have arisen from the present species.

### *Columba œnas*, *L.* Stock-Dove.

Mr. Moodie-Heddle says he finds a note in his copy of

MacGillivray that this species occurred at Risa, Orphir, and Melsetter in the years 1849 and 1859.

Mr. Reid informs us that he saw a Stock-Dove that had been shot at Deerness on Nov. 12th, 1861, which was being stuffed by Mr. Forbister, watchmaker, Kirkwall.

It would be impossible to trace these specimens even if they are in existence, and we must therefore trust to our correspondent's accuracy. Seeing that the Stock-Dove has only been known in Sutherland, at least as a breeding species, since 1889, it is strange to find it occurring in Orkney so far back as 1849.

### *Turtur communis*, *Selby*. Turtle-Dove.

We have several notices of the Turtle-Dove in Orkney. Mr. Harvey shot one in Sanday in October 1885.

Mr. Ranken has twice seen the bird, once a few years ago flying in the direction of Binscarth plantation, again in 1884 in his garden at Kirkwall.

Mr. Moodie-Heddle tells us he has seen this bird several times. One was killed at Holm (pronounced Ham) in 1849, and another at Melsetter in 1865.

### Family **PTEROCLIDÆ**.

### *Syrhaptus paradoxus* (*Pall.*). Pallas's Sand Grouse.

Mr. W. Reid informs us that this Sand Grouse was observed in Orkney on the 8th of June 1863 by Marcus Calder, factor, and others.

On May 17th, 1888, a flock of twelve Sand Grouse visited the Pentland Skerries, and four were shot by Mr. Gilmour the lightkeeper, who sent two of them to Harvie-Brown for identification. They came with a fresh east wind in the forenoon, the weather being hazy at the time. On the 19th, a much larger flock was seen flying about the island. Mr. Gilmour also states that he heard of a large flock being seen about this time in S. Ronaldsay, and several small ones in the island of



Swona. Two birds were picked up on June 14th, on the Pentland Skerries, besides those above mentioned, but too far gone for preservation.

Four were seen by Mr. M'Cree of the Commercial Bank, Kirkwall, in the beginning of June, when fishing with Mr. Irvine-Fortescue at the loch of Kirbister; they passed about fifty yards from him.

On June 9th eight Sand Grouse were seen by Mr. Irvine-Fortescue and Buckley at Swanbister, flying overhead in a south-easterly direction, they were within a long shot; every now and then one would utter the call note.

On June 17th Mr. Ranken saw about twenty birds at Muddiesdale; they were feeding in a flock like pigeons. The people at the farm-house informed him that they had seen something like two hundred Sand Grouse together! Mr. Ranken questioned them particularly to see if they could have made any mistake, but no cross-examination could make them alter their original statement. The people were old tenants of Mr. Ranken's, and he had no reason to doubt their word.

On June 19th two Sand Grouse were taken alive by Peter Turfis on the estate of Tankerness. They had taken refuge in a peat stack, and one had been injured by the telegraph wire: the man took the birds to Mr. Cowan, who told him to take them back to the place where he caught them and turn them loose, which was done. Two or three days after that a flock of about fifteen flew over Turfis's head. Mr. Cameron of Burgar, who gave us the above information, was informed by Mr. Baikie of Tankerness that the Sand Grouse had bred there.

On June 21st Buckley saw four birds on Sanday, near the Start lighthouse, flying south-east out to sea; and the light-keeper told him that a flock of about sixty had been there for some time, but that he had not seen any since the previous Monday, the 18th. They were pretty tame, and he often saw them about the lighthouse; he did not molest them himself, but some were shot, and the hens were full of eggs.

In a subsequent visit to that island we saw six stuffed Sand Grouse in the possession of Mr. Lennie of Kettletoft, which had been sent to him for preservation.

On June 22d Buckley saw a flock of some eight or ten individuals on N. Ronaldsay, flying about north-east, and a man whom he met on the island told him that a flock of about twenty-four had been seen there some five or six weeks back, but that they had left since then.

In answer to our inquiries whether these birds have been seen in Orkney since we left in July 1888, Mr. Ranken says the only instance that he could call authentic occurred on August 8th, when Mr. F. Smith Peace, driving through Rendall with an Oxford Professor, saw a flock of from fifteen to twenty flying towards them; these, when quite close to them, wheeled suddenly round and went back in the direction they came from. These gentlemen had no difficulty in recognising the strangers. Other people told Mr. Ranken of Sand Grouse having been seen in Sanday and N. Ronaldsay, about fourteen to fifteen in each place, but no dates or particulars could be given: under these circumstances it is quite likely that some of these notices refer to those birds already mentioned.

Mr. Ranken was also told that these birds had bred in Orkney, and one nest of three eggs obtained, but he could not accept such a statement without proof.<sup>1</sup>

On Sept. 17th Mr. Irvine-Fortescue wrote us that he saw the skin of a Sand Grouse the day before in the shop of Mr. Williamson, watchmaker, Kirkwall, that had been picked up dead in Shapinsay "some time ago."

In another letter from Mr. Ranken, dated Sept. 21st, that gentleman says he had heard the night before from Mr. R. R. Peter that he shot two Sand Grouse out of a flock of some eight or ten near Rapness, Westray, that rose out of some long heather. Mr. Ranken saw the wing of one of these birds. He further adds: "I have met Mr. Allan, Scapa, to-day, who tells me the bird he caught (in May) is still living in a cage and is quite tame, and became so a few days after its capture, eating hemp seed, boiled potatoes, and meal, and such like. This Sand Grouse has been fully four months in solitary confinement. It gives a kind of 'clucking' cry at times."

In the *Orkney Herald* of Oct. 17th, 1888, it is reported that

<sup>1</sup> We have received no confirmation of this.

Mr. William Laughton of Millhouse, parish of Holm, shot three Sand Grouse the previous week near the Established Church, being the first of the kind ever got in that parish. About a dozen of these strange birds were seen for several days near the same place.

In a letter from Mr. J. R. Cook to Harvie-Brown, dated October 21st, 1888, he says: "On both N. Ronaldsay and Sanday we came on Sand Grouse. On N. Ronaldsay I think there were about sixty or sixty-five we knew of. On Sanday I saw only nineteen, but Briggs saw two flights, small ones, which could not have had anything to do with the lot I saw. We took specimens on N. Ronaldsay and Sanday. I fear there are no young birds. Traill's griever, a very intelligent man, told me he saw them first in May (in N. Ronaldsay), from sixty to a hundred he thought; says they never broke up during the summer, as he used to see the one flight feeding on ploughed and worked land off and on all the summer. We could hear nothing reliable as to their pairing on Sanday. I fancy there has been no breeding on either of the islands we were on. Most of our specimens were moulting however."

From the foregoing records it would seem that if the Sand Grouse ever did nest in Orkney it must have been in very rare instances, and that there is something in the climate or country utterly inimical to their taking up their residence permanently here.

## Order 2. **GALLINÆ.**

### Family **PHASIANIDÆ.**

*Phasianus colchicus*, *L.* Pheasant.

Mr. T. Ranken in his MS. notes informs us that his father obtained pheasant's eggs from Dumfriesshire in June 1859, and succeeded in rearing from them one hen and seven or eight cocks. The hen nested several times, once having fourteen eggs, but some boys found her out and ruthlessly harried the nest. The cocks mated with barn-door hens, and hybrids were produced that attained maturity. All these birds were gradually killed off by

poachers, and the attempt to get up a stock of pheasants near Kirkwall was abandoned. Attempts by other proprietors to introduce pheasants into Orkney, as at Binscarth and Muddiesdale, were not more successful.

A pheasant was killed at Eday, having most probably come over from Shapinsay, where Colonel Balfour kept some.

### *Caccabis rufa* (L.). Red-legged Partridge.

Red-legged Partridges were introduced into Orkney, near Kirkwall, by the Earl of Orkney in the year 1840, but they soon disappeared.—(Note by J. G. Heddle, Esq.)

### *Perdix cinerea*, Lath. Partridge.

Low in his *Tour* mentions that Partridges were introduced into Hoy and Walls by a Mr. Moodie of Melsetter, but they did not thrive, owing probably to there being so many birds of prey, and want of shelter.

Since then, many attempts have been made to introduce this bird into the Orkneys by various proprietors, but all seem to have failed. Some few still exist in Rousay and Shapinsay, but in 1883 there were only some four or five left in the former island. In Rousay they were introduced by Mr. Traill of Woodwick, who got birds from Caithness; these bred for a few years and then disappeared. They seem to have been again tried by the present proprietor, General Burroughs, with the same result.

They have been tried also on the Mainland, once by Mr. Irvine-Fortescue's father at Swanbister, but the young birds died.

Mr. Moodie-Heddle attributes the failure of the Melsetter attempt to their not being sufficiently numerous to begin with. On the other hand, he thinks that they are dying out in Rousay and Shapinsay by reason that the coveys are not sufficiently driven about and broken up, thus allowing birds of the same covey continually to breed in-and-in, and with this opinion we quite agree.



**Coturnix communis, Bonnat. Quail.**

A bird that has been noticed much more frequently of late years. As far back as October 4th, 1851, J. H. Dunn obtained a nest containing eleven eggs, and it has since then been found breeding in other parts of the Mainland.

The late Robert Heddle said that the Quail was seen and heard in Orphir in 1853, shot near Kirkwall 12th January 1854, and again at Melsetter in 1855.

Mr. Moodie-Heddle of Melsetter says that he has killed Quails several times, the last being in 1883. His father had a note that he had killed them in October and December. They have been seen at Hobbister at the end of May, and were supposed to have bred there.

In May 1881, Mr. Irvine-Fortescue heard daily for about a fortnight, at Swanbister, what he took to be a Quail.

From several correspondents we hear that a nest or two have been taken in Orkney; and we saw an egg in the possession of Mr. Cursiter, Kirkwall, which belonged to a nest of ten taken in the parish of Holm, on the Mainland, in October 1881.

Dr. Traill of Woodwick obtained a Quail in N. Ronaldsay in July 1885.

**Family TETRAONIDÆ.****Lagopus mutus, Leach. Ptarmigan.**

Little information is to be obtained about the existence of the Ptarmigan in Orkney. It inhabited Hoy only, and Dunn mentions, in his *Guide*, that a few pairs of this bird were shot in one season there, but none had been seen since.

Mr. Moodie-Heddle tells us that the last birds were killed in Hoy about 1831, by a Lieutenant Monro, then living in Stromness, but, from Messrs. Baikie and Heddle's account, their numbers had been much reduced before then, by the officers of the Trigonometrical Survey.

Mr. Ranken says that Ptarmigan were found in Orkney some fifty years or so ago, but he heard that the commander of a gun-boat calling at Stromness and landing at Hoy, the only

island where they were to be found, completely extirpated them; his bag having been stated as high as 14 brace in one day. The late Dr. Duguid of Kirkwall was Mr. Ranken's informant.

*Lagopus scoticus* (*Lath.*). Red Grouse.

Orc. = *Muir hen*.

In vol. xvi. p. 480 of the old *Statistical Account* for the year 1795, the following passage occurs: "About eighty years ago Muir-fowl frequented some of the hills, and were shot within a mile of the village of Stromness. . . . Now, 1795, none are seen."

We have no reason to suppose that Black game ever existed, more than as an accidental visitor (see under species), to Orkney, and the above-quoted passage may therefore well be taken to refer to the Red Grouse. We think there is a good deal of interest attached to this, as showing that in all probability the birds were suffering from the disease which comes so much more frequently throughout Scotland now-a-days. Had they been shot out, some record would most likely have been left of the fact, as was the case with the Ptarmigan just mentioned. At the same time we are given to understand that disease at the present day, rarely, if ever, makes its appearance in Orkney.

Low in his *Tour* speaks to the abundance of "Moor-fowl" in Hoy and Flotta, and the parishes of Holm and St. Andrews on the Mainland; and their scarcity in Risa Little.

At the present time Grouse are found on the Mainland, Hoy, Burray, Flotta, Fara, Risa Little, Cava (where of late years, Mr. Moodie-Heddle informs us, they have bred), Eday and Rousay. In all these islands they are resident, but they also occasionally visit Sanday from Eday, as we are informed by Mr. Harvey; and Buckley was also told that they have been known to fly as far as Westray from Rousay. This may seem a long flight for a Grouse, but, during the severe winter of 1879-80, Grouse were observed to cross from Scrabster, near Thurso, to Hoy, which is about eleven miles; they were seen on their journey, passing the mail steamer.

It is quite probable that owing to these partial migrations,

which would infuse new blood into the different islands, and by judicious shooting, Grouse are kept up to their present numbers, though from other causes, such as increase of cultivated areas (which of course takes away from that available for these birds), they may not be quite as numerous as in former years.

Mr. Ranken's father in September 1845 killed 25 brace in seven hours, but his son tells us that they are not nearly so numerous now, indeed almost scarce in places where he remembers them to have been plentiful.

In Hoy, Mr. Moodie-Heddle informs us that the stock of birds keep about the same when fairly shot; if *under* or *over*-shot, they diminish in a few seasons; if under-shot, the birds of a covey begin to separate into pairs at the end of October or beginning of November; if over-shot, the reason is obvious.

Mr. Watt of Skaill says that "in Sandwick and Stromness parishes Grouse are scarce, as the hills are not suitable, the heather being too short. Six or eight coveys, bred on Teuston and the West Hills, would, I think, seem the lot for both parishes."

Concerning the weights of Grouse Mr. Moodie-Heddle writes us: "I have not been in the *habit* of weighing (game), but I remember about 1866 my father and I weighing two birds out of a bag, and again other two, and in both instances the brace was about  $1\frac{1}{2}$  oz. over the then highest recorded weight. This was at Melsetter, where birds are somewhat heavier than here (Hoy Lodge). A man who has shot over a great part of Scotland for many seasons, told me that the heaviest birds he ever came across were at Melsetter, and at Borgie in Sutherlandshire."

The Rousay birds are said to be the heaviest of any part of Scotland, and when they are at their best, October and the early part of November,  $1\frac{3}{4}$  lbs. is not at all an unusual weight. After that time the Grouse seem to get smaller and lighter, they certainly do not seem so large when brought to the table.

In Rousay at least, Grouse seem to vary but little in plumage, the real rich red bird being the scarcest, as in Sutherland, and the cocks and hens are, at times, almost identical in coloration.

In Hoy, birds with one or both wings white have been shot by Mr. Moodie-Heddle, and on one occasion one that had three legs. A Grouse with both wings white was shot by him in 1866, and another with only one white wing about 1883.

We noticed that in Rousay Grouse are remarkably silent birds, a crow being rarely heard, even in the breeding season, but this does not hold good in Hoy, as Mr. Moodie-Heddle informs us.

As long as the crowberry is to be found, Grouse feed on them much more than on the heather, and this is apparent not only by their droppings, which at that season are soft, and coloured by the juice of the berries, but by their whiter and tasteless flesh, so different from that of a pure heather-fed bird, and which makes a Grouse the prince of feathered game.

In Rousay, Grouse were observed to come to the stubbles during stormy weather in October and November in the early morning and late evening, retiring to the nearest heather during the day; they lie well to dogs, if the weather be fine, to the end of the season.

Mr. Ranken relates a curious instance of the closeness with which a hen Grouse sits on her eggs. He says: "I once put my heel on the head of a hen Grouse, and so accidentally killed her, when I was walking over the heather; she was sitting on seven eggs. Not till I heard a flutter behind me was I aware of what had happened, and, on turning round, I saw the bird tumbling about, a yard or two off."

Mr. Gold, Lord Zetland's factor in Orkney, who has had as great an experience of sport in these islands as any man, says that Grouse are dying out from over-burning, and burning at all seasons, as well as from being systematically over-shot. In Flotta Mr. Gold once killed nineteen brace in one day in August; later on in the season many birds come over there from N. Walls; they are only stray visitors to S. Walls.

We can well indorse Mr. Gold's statement of over-burning. This year (1888), besides other small fires after the season was over for moor-burning, we saw one in the parish of Firth, on the Mainland, which was burning from Friday, June 29th, to Sunday, July 1st; this must of necessity have done immense



damage to late nests and young birds, and could only have been done out of sheer spite or mischief. The weather at that time was very dry, and the fire would burn the heather, even the very roots, and so a large area of moor would be irretrievably ruined for Grouse.

*Tetrao tetrix*, L. Black Grouse.

Mr. Moodie-Heddle sends us a note that a Grey-hen was killed at Holm in 183 — (?), as jotted down by his father. Mr. T. W. Ranken informs us that his father tried to introduce Black Game by means of eggs into Orkney about the year 1859; the chicks hatched out, but came to an untimely end.

Order 3. **GRALLÆ.**

Family **RALLIDÆ.**

*Rallus aquaticus*, L. Water-Rail.

Since Messrs. Baikie and Heddle wrote, the loch of Aikerness and the Crantit meadows, both on the Mainland, and both given by these authors and others as breeding-places of this bird, have been drained, and we have no authentic evidence that a nest was ever actually taken. Mr. Reid says they are common all the year round, but difficult to see.

Mr. Watt tells us he shot one some years ago in the burn of Skail, but that they are rare in the parish. In Sanday Mr. Harvey mentions the Water-Rail as breeding amongst reeds in the ditches and marshes, but here the Water-hen is probably meant.

Mr. Ranken's father stated that up to the year 1858 he had seen about twenty birds in as many years, and on one occasion he shot one sitting in a tree.

Mr. Ranken also gives us a curious account of a Water-Rail attacking a wounded Snipe. The Snipe fell, wounded, in a ditch, and the Water-Rail, seeing it fluttering on the ground,

apparently thought it wanted to show fight, and commenced to give battle to the Snipe, ruffling up the feathers round its neck like a gamecock, and striking at the Snipe in the manner gamecocks do to each other.

*Porzana maruetta* (*Leach*). Spotted Crake.

We have no further evidence that this bird has occurred in Orkney since the bare statement by Messrs. Baikie and Heddle, that it has been observed, though rarely, in Sanday.

*Crex pratensis*, *Bechst.* Land-Rail.

An exceedingly abundant summer visitor to all the islands, though according to Mr. Ranken, not so plentiful as it used to be, on account of the spread of the Brown Rat, and he gives the island of Stronsay as an instance of this.

We have received so many accounts of the Land-Rail having been found in winter that it would be superfluous to mention them separately. We cannot account for this unless it is that the equability of the climate induces them to stay longer than where it is otherwise, and the abundance of old turf-dykes, which give them excellent shelter.

Mr. Moodie-Heddle sends us the following notes:—

“This bird is often found in winter, both in Orkney and in Ireland, which makes the people say they are ‘sleepers.’ They feign death when captured by hand, as I have personally proved. When the crops are cut early, and they take to the barer moor ground before migrating, they fly much more strongly, and to a considerable distance. It is only when *cover is near* that they fly with their feet hanging down. My father saw one on Christmas day, and Mr. Traill of Holland and the late Mr. Scarth of Binscarth have caught specimens about the same time of year. These were doubtless birds which had been injured or too weak to migrate.”

We found the Land-Rail very abundant during our visits to Orkney in 1883 and 1888; in the former year we found one

sitting on its eggs on August 1st; they seemed to inhabit every island we visited. Mr. Reid of S. Ronaldsay once hatched out some Cornerakes' eggs under a Bantam; they all did well, and lived for more than eighteen months, and were then only killed by accident. During the whole of that time none of them ever uttered their well-known cry.

### *Gallinula chloropus* (L.) Moor-hen.

By no means an abundant species, but is scattered through most of the islands where suitable places are to be found. Low seems never to have seen the bird himself, but mentions it as breeding in the now drained loch of Aikerness.

Mr. Watt says he has only seen one at Skaill, which he shot.

Mr. Heddle's father had a note that the Water-hen bred in N. Ronaldsay and Stronsay, and Mr. Harvey tells us it breeds in Sanday.

Mr. Irvine-Fortescue sees one or two most winters about Swanbister, and has known of one nest there; he accounts for their scarcity by the want of cover round so many of the Orkney lochs.

As far back as 1845 Mr. Ranken's father saw three or four nests in the Crantit meadows in June; he also mentions that they breed at Græmeshall, in the south of the Mainland. Mr. Spence also informs us that the Water-hen breeds in South Ronaldsay.

We ourselves have rarely seen the Water-hen in Orkney; once in Rousay in 1883, and another time in Egilsay in June 1888; but we have seen eggs taken both in Rousay and in the Mainland, and were told of several localities in the latter island where they breed.

Mr. Reid of S. Ronaldsay tried to rear some young birds from eggs placed under the same bantam that reared the Cornerakes before-mentioned. The eggs hatched out quite right, but, when just hatched, the young birds uttered such a peculiar note, very like a young kitten before it opens its eyes, that the hen got frightened and deserted them.

**Fulica atra (L.). Common Coot.**

Orc. = *Snaitth*.

A common species, and seen by us on all the islands we visited, where there were suitable localities. We have seen their nests in Rousay, in an island in Loch Saviskail, placed on the ground under docken leaves, which is perhaps an unusual site; other nests in the same loch were built and placed in the more ordinary manner.

Mr. Watt writes us that they migrate from the loch of Skaill, it being a rare thing to see one there in winter.

Mr. Irvine-Fortescue has seen small flocks of from six to a dozen on the loch of Harray in winter, and, on one occasion, shot two out of a flock of between one hundred and fifty and two hundred Widgeons.

In June 1889 we sat watching two Coots feeding in the loch of Skaill close to us. They seemed mostly to be picking small insects or shells from the plants, but at times they dived and brought up small portions of weed, which they either ate whole or picked over.

Family **GRUIDÆ.**

**Grus communis (Bechst.). Common Crane.**

Notices of this bird in Orkney appear to be very vague. Sir Robert Sibbald mentions their occurrence in these islands, and Dr. Fleming states that a small flock were seen at Tingwall in the autumn of 1807 (Baikie and Heddle, *Fauna Orcadensis*).

At page 7 of the *Statistical Account of Orkney* it is stated that the Crane is found in Orphir, but this most likely refers to the Heron, which is so often called a Crane.

In the 4th edition of *Yarrell*, the Crane is stated to have often occurred, but none of our correspondents have ever mentioned it to us.

**Grus virgo (L.). Demoiselle Crane.**

A very fine specimen of this bird was shot on the 14th May 1863 on the Mainland at Deerness, the most eastern parish in Orkney.



Two of them had been seen in Deerness for some days before, and were pursued and shot at several times. When the one was killed, the other flew over to the neighbouring island of Copinsay, and was not seen afterwards at Deerness.

In the stomach of the one that was procured there was nothing but a few grains of oats, but it did not appear to be starved, and weighed about five pounds. The gulls and lapwings continually attacked the two strangers whenever they walked or winged their way over the grass or oat fields, and they were heard frequently to utter a hoarse scream when thus persecuted by their tormentors.

The bird was bought by Mr. Reid, bookseller of Kirkwall, from the owner, who was hawking it about the streets, and who said that "if he did not get his price for it (a very few shillings) he would, on getting home, pluck it and make soup of it."

Mr. Reid had the bird stuffed, and it afterwards passed into the collection of Mr. Christy Horsfall, Leeds.

*Extracted from the different local papers.*

#### Order 4. **LIMICOLÆ.**

##### Family **OTIDÆ.**

##### **Otis tarda (L.). Great Bustard.**

A beautiful specimen of this bird was shot at Holland, Stronsay, by Mr. Steavenson in March [April ?] 1886. The bird proved to be a female, the eggs being in a forward condition. Its weight was 9 $\frac{3}{4}$  lbs., and it is now in the possession of Mrs. Balfour of Balfour and Trenaby. The stomach was filled with green matter, either grass or turnip tops. Before it was shot the bird was very tame, and made only short flights. An attempt was made to catch it, but was unsuccessful.

##### Family **CHARADRIIDÆ.**

##### **Charadrius pluvialis (L.). Golden Plover.**

Resident and common, receiving large additions to its numbers in autumn.

From all our correspondents we have received the same report, viz., that the Golden Plover is not nearly so numerous at any time of the year as it used to be. Of course drainage and reclaiming waste lands has had a great deal to do with the decrease; but another very potent cause is the increased number of guns. This seems to prove that a vast number of those killed in the late autumn are home-bred birds. The flocks then consisting of young birds are much less suspicious and more easily approached, and give a better chance to the gunner than hunting a few stray birds on the hill-side in August and the early part of September. Our own experience has been that the Golden Plover is by no means so very abundant, either as a breeding or migrating species, though in the former capacity they are very widely spread. In Rousay they appeared almost entirely to desert the island in the autumn; a few, and these wild and very local, appearing again in the winter.

Others, with whom we have conversed on the subject, are inclined to the same opinion as ourselves, viz., that the Golden Plover is a rapidly decreasing species, not only in the Orkneys, but in other places as well.

### *Charadrius fulvus*, *Gmel.* Eastern Golden Plover.

On November 26th, 1887, Mr. J. G. Millais received, in the flesh, a specimen of this bird, which had been killed near loch Stenness, by a boatman, who occasionally sends him anything he thinks rare. It seems to us that it showed more than ordinary discrimination on the part of the boatman to be able to pick out that bird as being anything unusual, from among a lot of the common Golden Plover. The bird was recorded in the *Field* of December 10th, 1887.

### *Squatarola helvetica* (L.). Grey Plover.

Besides those mentioned by Messrs. Baikie and Heddle, we have received notices of several others that have been procured in different parts of the county. Mr. Reid obtained one from Strang, Sanday, in 1848. In 1849 Mr. Ranken killed two

at a shot from a small flock of five, near Stromness. In 1864 or thereabouts, Mr. Watt shot three "Silver Plovers"<sup>1</sup> near the loch of Skaill, which were possibly Grey Plovers. Mr. Cameron, late of Burgar, had one in his possession which he had shot in September 1888, at Deer Sound. Other instances we might quote, but they only go to show that the Grey Plover is a scarce autumn migrant to these islands, rarely, so far as we know, remaining the winter there, and only appearing in very small numbers when it does occur.

Since writing the foregoing, Mr. Monteith-Ogilvie writes us that he shot a Grey Plover at Papa Westray on November 30th, 1889; it was with some Curlews, from which it separated on being flushed, and settled on a newly ploughed field. This is the only one that gentleman ever saw in Orkney; the date of its capture is very late.

Another Grey Plover was sent to Mr. L. Dunbar, Thurso, from Orkney, in December 1889, for preservation.

### *Ægialitis hiaticula* (L.). Ringed Plover.

Orc. = *Sand-Lark*.

Everywhere abundant and resident, assembling at times in the winter in considerable flocks. It breeds almost anywhere in the islands, except in heather or long grass, fields with the young corn just appearing being a not unfavourite spot.

### *Eudromias morinellus* (L.). Dotterel.

In the *Zoologist*, C. R. Bree states that a nest of this species was found in Hoy in 1850; Messrs. Baikie and Heddle considered it a winter visitant there. Mr. Spence informs us that Sinclair, the late bird-stuffer in Kirkwall, shot eight Dotterels out of a flock in Burray on May 25th, 1857. No other correspondent has observed it in the islands, nor have we ever seen a specimen there alive or stuffed.

<sup>1</sup> These may, however, have been Knots.

*Vanellus vulgaris*, *Bechst.* Lapwing.

Orc. = *Tee-whoop* (Low). *Tee-ick*.

Still abundant though not nearly so much so as formerly; a few now remain throughout the winter.

Mr. T. W. Ranken writes us as follows:—

“The Green Plover is still abundant in Orkney, but not nearly so much so as they used to be some forty or fifty years ago. They were seldom observed to winter here until about twenty years ago, when they began to do so in large numbers, and now a considerable quantity remain throughout the year, which is augmented towards the end of February by other migratory birds. I have observed that a considerable number do not pair, but remain in small flocks until these are increased by the addition of the breeding birds and their young. Query—Are these barren birds not the young of the previous year, which do not breed until the second year?”

Mr. Irvine-Fortescue sends us a record of the dates on which the Lapwing has appeared at Swanbister. On only one occasion has he seen them as early as January; this was at Deer Sound, and he adds that “a few may occasionally winter on Deer Sound or Scapa Bay.” The Lapwings seemed mostly to arrive about the middle of February; on one occasion, 1879, not until the middle of March. Mr. Irvine-Fortescue adds that from the 8th to the 12th of April is the time to find nests full of fresh eggs in his locality.

Mr. Watt, writing from Skail, says that the Lapwing arrives in his locality during the months of February and March, and that a few *sometimes* remain throughout the winter.

We ourselves have seen Lapwings in Rousay quite at the end of November or the beginning of December. On one occasion we found a nest of *five* eggs, all just commencing to hatch out.

*Streptilas interpres* (L.) Turnstone.

Orc. = *Stone putter* (J. G. M.-H.).

A common autumn and winter visitant, but Mr. Moodie-Heddle remarks that they, like other small shore birds, are getting



scarcer. Mr. Watt remarks that at Skail they are rare, and that he has not seen one for a good many years.

Mr. Irvine-Fortescue saw a pair on the "Barrel of Butter"—formerly called "Carline Skerry"—on 26th May 1884. There were no eggs of any sort on the Skerry, but, as a boat had visited it a day or two previously, the reason was obvious.

The Turnstone remain at times well into, if not through the nesting season, and we have seen them ourselves on the "Grand," the eastern point of Egilsay, in June and July in full summer plumage. Mr. Millais has also seen them near the Black Craig at the end of June.

Some time ago we had been informed that a Turnstone's nest had been found by Mr. Begg, Stromness, and Mr. Moodie-Heddle has kindly sent us the following notes which he got from Mr. Begg himself:—

"Begg says he was on hard ground on the hill above Dwarfie Hammer's (Hoy), and between that and the Tronie Glen,—and, the bird rising near him, he shot it, and *afterwards*<sup>1</sup> found the nest. He thought the skin went to Tristram also with one egg, but would not be certain from memory; he (Begg) is not a young man, having been in my father's employment in 1846. Begg, by the way, said that Dunn would not believe about the eggs being Turnstone's until he compared them with Norwegian examples that he had, and was then compelled to admit that they were genuine."—J. G. M.-H. in *lit.*, May 8th, 1890."

Mr. Begg himself informed us that he shot the bird and got the nest of three eggs in 1860. Canon Tristram got the bird and one egg, and Mr. Moodie-Heddle and Hubbard one egg each.

Knowing the very great interest that would naturally attach to a British Turnstone's egg, we made special inquiries with the result that none of these eggs are now forthcoming, nor, from the position of the nest, is it likely that it belonged to a Turnstone. As will be seen by a reference to the description, the bird was first shot and the nest afterwards found.

<sup>1</sup> These Italics are ours.

Professor Newton kindly looked over the printed catalogue of Canon Tristram's collection, and found at p. 18—"Strepsilas interpres. ♀ Orkney, 10/6/51. J. Begg."

However, the fact of a Turnstone being shot in the middle of June proves nothing, as we have seen them ourselves in Orkney all through the summer.

If Canon Tristram had a Turnstone's egg from the same source, Professor Newton must have heard of it, and as the latter gentleman used to get Hubbard's list from time to time, such an egg would most assuredly not have been passed over by him. Hubbard has been dead some thirty-five years or more. Neither does Mr. Moodie-Heddle's specimen seem forthcoming.

We give all these facts to our readers, leaving them to judge their value for themselves, and at the same time, we wish to do justice to all our correspondents' information.

### **Hæmatopus ostralegus, L. Oyster-catcher.**

Orc. = *Scoolder*.

Very abundant in most places in the breeding season, but much scarcer in the winter, almost becoming a rare bird then. At Skaill they are not so numerous, and, when seen, are either in small flocks of eight or ten, or in pairs. Mr. Reid mentions one killed at Shapinsay, on the 9th of January 1864, as if it was a rarity at that season.

Mr. Irvine-Fortescue remarks that the Oyster-catchers feed principally by boring with their beaks down into the sand for cockles, and by forcing limpets off the rocks, and then picking out the mollusc. At Swanbister they do not, as a rule, number more than eight or ten in a flock.

### **Family SCOLOPACIDÆ.**

#### **Recurvirostra avocetta, L. Avocet.**

Beyond the bare statement in the 4th edition of *Yarrell*, vol. iii. p. 301, that the Avocet has occurred in the Orkneys, we have no other notice of its having been found there.

*Himantopus candidus*, *Bonnat*. Black-winged Stilt.

With the exception of the two mentioned by Messrs. Baikie and Heddle as having been killed at Lopness, Sanday, in 1814, we have no record of this species in Orkney.

*Phalaropus hyperboreus*, *L.* Red-necked Phalarope.

Orc. = *Half-web* (B. and H.).

First recorded as a British species by Pennant in 1769, from a specimen sent from Stronsay.

In a paper by T. W. Simmonds, read before the Linnean Society in June 1804, that gentleman first records the breeding of this species in Great Britain, having found it in Sanday and North Ronaldsay, though he was unfortunately unable actually to find the nests themselves. As this paper has not often been quoted, we extract the following paragraphs:—

“It might have been doubted that the female was more beautiful, and even somewhat larger, than the male, had not the size, etc., of the sexual organs been sufficiently evident to prevent the possibility of a mistake.”

“Six females and two males were dissected. From the small size of the *ovaria*, the thickness and length of the *oviduct* of the female, and large flaccid *testes* of the male, it was concluded that the eggs had not been long laid, and that the males were not young ones, as their less bright plumage at first gave reason to suspect.”

“From the deficiency of feathers on the belly of the male, from the duller plumage, from the very few that appeared, and from the difficulty which these required to be driven from those tufts where the nests perhaps were, would it be absurd to suppose that the males alone perform the business of incubation?”

“As none of the inhabitants had observed them before, they had no provincial name, nor was it possible to ascertain whether they frequented any of the other islands.”

“If upon more accurate inquiry this should prove to be a new species, perhaps there would be no objection to the name *Williamsii*, as it is to the liberality of Mr. J. Williams, of Dartford, that I am indebted for the discovery.”

Simmonds, it appears, accompanied Robert Stevenson, the celebrated engineer, on one of his annual inspections of the northern lighthouses.

Bullock, writing to Montagu, says that he found this Phalarope common in the marshes of Sanday and Westray in the breeding season. It is mentioned in the *New Statistical Account* of Orkney as being found in Walls and Flotta, and also as breeding in North Ronaldsay.

We extract the following from Mr. Salmon's diary, 1831: "June 12th. On the island of Sanda—in going towards Burness, in a small loch we found the Red-necked Phalarope (*Phalaropus fuscus*). We saw several pairs of these beautiful little birds; they were perfectly tame. Although we shot two pairs, those that were swimming about did not take the least notice of the report of the gun, and they seemed to be much attached to each other, for immediately one of them flew to a short distance the other directly followed, and a female that I held in my hand that was wounded, its mate came and fluttered before my face. We were much gratified in observing the motions of these elegant little creatures as they kept swimming about, and were for ever dipping their bills into the water, and appeared not to take the least notice of us, although within a few yards of them. After some little difficulty we were very fortunate in finding their nests, which were placed in small tufts of grass that were growing close to the edge of the loch, and composed of dry grass, about the size of a Tit-lark (*Alauda pratensis*), but much deeper. The eggs are considerably smaller than those of the Dunlin (*Tringa alpina*), and beautifully spotted all over with brown. They had only just commenced laying, as we found only from one to two eggs in each nest, but we were informed that their usual number is four. They are called 'Half Web.'"

R. Dunn found the bird in Sanday, Westray, and again on the Mainland at a loch in Sandwick, but seems to have exterminated them, or at least did his best to do so, at the latter place, as he says: "about a week afterwards we got five birds, being all that we could find."

We quote the two following extracts from Wolley's *Egg*



*Books*, as showing the gradual decrease of this bird in those days :—

“Two specimens, blown with one hole, and a bit of paper pasted over the hole. . . . These two eggs brought to me at Cambridge Terrace this morning, December 8th, 1851, by Mr. Charles Hubbard of Ditchburgh, Norfolk, the inventor of the portable gutta-percha boat. He visited Sanday where he saw Mr. Strang of Lopness. There were then very few Phalaropes, and he paid strict attention to the wishes of the proprietors. These were the only two eggs he received this year of the bird, they were both in the same nest in the island of Sanday—and his correspondent could find no more.” (Wolley, *Egg-Book*, iv. p. 580.)

Again, Wolley writes in his *Egg-Book*—

“Red-necked Phalarope. Sanday, Orkney, 1853.—Three others (eggs) sent by post to T. Edge from William Kirk, of Start Point Lighthouse, with a letter, which I have somewhere ” (747). Mr. W. Kirk writes—

“*Start Point Lt. H.*, 7th Oct. 1854. SIR,—I am sorry I have only found two eggs this summer, as that bird has become very scarce, but next year they may be more numerous, etc., etc.”

These eggs seem to have been broken in transmission.

The following is an extract from some of our notes :—

“The Red-necked Phalarope seems to have been pretty common in Sanday about twenty-five years ago. At that time a party landed from a ship and destroyed the greater part of them. None were seen at the locality for ten years afterwards, until last summer (1880), when six frequented one of the lochs for some time. Our informant seemed certain they had bred there.”—From Mr. Vaughan, 16/11/80.

In a letter from Dr. W. Traill of N. Ronaldsay to Mr. Spence, dated May 1882, he says—

“I am not aware of the Red-necked Phalarope having been here since about 1833 or 4, when I remember shooting a pair of them, which, I believe, are now in the College Museum in Edinburgh. I, however, saw one or two, not long ago, in Sanday, which were shot by Captain Harwood on his property there. I am sorry I cannot get the eggs here; possibly D—— L—— may know something about them,”

Mr. Spence was informed by Mr. Duncan Robertson, that when he was in Sanday in July 1879 he shot a specimen of this bird in a pool near ———. The same day he saw three others, old birds, and, in another place, a pair of old birds with five or six (*sic*) newly-hatched young ones. Mr. Robertson adds: "I have only once seen one on the Mainland, and that was shot at the loch of Carness about thirteen years ago."

Our own experience of this bird in Orkney in 1888 is as follows. Landing on ———, we met our valued correspondent, Mr. Harvey, who had come over on business. He showed us first of all a small pool near the sea-beach covered with a white flowering plant and some bushes and long grass growing in it, where, the previous year, two old birds had been shot by a gentleman before the young could fly; there were no birds there at the time of our visit. We then went across to another small loch, where Mr. Harvey had already seen some of these birds, and where, to our great delight, we found some seven or eight. We hunted for their nests, but could not find any; probably we were too early, and, in any case, our time was too limited to make a very thorough search. As always described, the birds were very tame, swimming about after insects, sometimes going along the water with outstretched neck as if stalking one, at another time leaping up as if to take one off a reed.

We were informed by a correspondent that the Phalaropes are at last beginning to get up their numbers now in some places since their almost total extermination, and it is earnestly to be hoped that such slaughter may not occur again.

### Phalaropus fulicarius, L. Grey Phalarope.

A rare visitant, and we have only one or two notes of specimens obtained.

One we saw in the collection of Mr. Denison of Brough, in July 1888, which had been obtained in the island of Sanday.

Mr. Irvine-Fortescue shot one at Swanbister on October 26th, 1881; it was exceedingly tame, and fluttered on the slight ripple breaking on the beach, just where the waves were actually curling over, apparently seeking food. Another was shot in

Stromness Harbour by Mr. Robertson of that town in October 1884, as Mr. Millais informs us.

### *Scolopax rusticola*, L. Woodcock.

The first mention of this bird as an inhabitant of Orkney seems to have been made by Low in his *Tour*, where, at p. 51, he says, speaking of Holm: "And I have heard of straying Woodcocks found here, but this I cannot affirm with certainty, as I myself have never\* observed any of this species in Orkney."

Dunn says that the Woodcock is occasionally seen in Orkney, but only remains for a day or two. Baikie and Heddle, however, mention it as remaining all the winter.

Mr. Watt of Skail says he has only shot one Woodcock in his parish, and that the only one he ever saw—it was in November 1875. Mr. Watt adds that a few arrive every year in the Stromness hills in October and November.

Mr. Ranken's father, writing in 1860, has the note that he shot many Woodcocks in Orkney during the last twenty years, and adds that the late Mr. Heddle of Eday obtained five brace there in one day.

On March 4th, 1887, Mr. Ranken flushed seven birds close together at Canwick, Eday.

Mr. Moodie-Heddle says, under date of December 1887: "These (Woodcocks) are now more numerous, and a few remain to breed in Hoy. One year, about 1873 or 4, twenty-six couple were killed on the Hobbister shootings in a fortnight."

Mr. Barnett, Crown Chamberlain, informed Mr. Spence that his ferrets put a Woodcock out of some whins at Quanterness on 1st January 1877. He saw three at the same place in January 1878, and one in Sanday in October of the same year. On the 16th June 1879 a Woodcock with a broken wing was caught by his children at Quoybank. The wound was nearly healed, but the bone was quite healed. He let it go at Mud-diesdale. The bird must have been wounded during the winter, and so been unable to leave the country.

Mr. Harvey informs us that a few Woodcocks are seen yearly in October on Sanday, but only for a few days.

In the winter of 1886-7 Mr. E. S. Cameron shot seven Woodcocks on his shootings of Bargar, on the Mainland.

When Buckley was in Rousay in 1883, up to December 10th no Woodcocks had been seen, but, some time after his departure, the keeper sent him one or two. He was told that they appear more numerous in moderately hard weather, but should it get too severe they all leave.

In 1888 we were told by the Rousay keeper that Woodcocks bred there, and that there were at least two nests near Trumbland, the eggs having been seen by him. Mr. Moodie-Heddle has since informed us that, at times, Woodcocks are very abundant in Hoy, and he has known of between thirty and forty birds being flushed there in a single day, though six-and-a-half brace was his best bag.

### *Gallinago major* (*Gmel.*). Double Snipe.

By all accounts a very rare bird in Orkney, and we have few authentic instances to record since Baikie and Heddle's time.

Mr. Cowan says he has only seen one in forty years. Mr. W. Reid informs us that Mr. Calder shot a Double Snipe in Shapinsay, in September 1863.

Mr. Moodie-Heddle writes us he has killed this species twice or thrice in Hoy; and Mr. Watt shot one near Skaill, at the pools of Mire, in either 1864 or 1865, the only one he ever saw.

### *Gallinago cœlestis* (*Frenzel*). Common Snipe.

Orc. = *Horse-gowk* (B. and H.)

Though still fairly abundant, and breeding in all the islands and holms, yet the Snipe is getting a scarce bird in Orkney in comparison to what used to be the case. All the evidence of our correspondents tends to this, and in most cases these gentlemen ascribe it in great measure to the one cause, viz., the very severe winters of 1878-9 and 1880-81. This goes a long



way to prove what Mr. Gold, Lord Zetland's factor, considers to be the case with the Orkney Snipe, *i.e.* that they are resident to a very large extent. Of course, other causes have contributed to their scarcity, such as drainage of their breeding and feeding grounds, egging, and the increasing number of "gunners."

The largest bag Mr. Gold can ever remember being made by one man, was 47½ couple, killed by a Mr. Farrar.<sup>1</sup> Mr. Gold and two friends once killed fifty brace in a day, and Lord Zetland has shot 22½ couple in about three hours in South Ronaldsay. Great numbers of Snipe frequent a loch at Burwick in the last-named island, and Mr. Gold has seen at least 100 of these birds flying from the loch to the sea-shore close at hand. At first he took them for Golden Plover, there were so many together.

In 1883 Buckley found Snipe abundant in Rousay, more so, perhaps, in August and September than at any other time, their visits in any quantity after that date being very uncertain. Both in that year and in 1888, we found them breeding on almost every island we visited, though perhaps less commonly in the latter year.

Mr. Watt of Skail writes us that Snipe were numerous in his parish before the pools of Mire, Scarwell, and Bain were drained, the first-named place having been a favourite nesting ground of theirs.

As is well known, Snipe breed until very late in the season. Mr. Moodie-Heddle once found a nest with the eggs just hatching, on 23d September 1858.

The last-named gentleman sends us the following account of a Snipe he kept in his garden: "I once found a Snipe with one wing half off, but quite healed. It was healthy and in good condition. It tried to rise at my feet, and tumbled over, making a great screaming. I carried it home and put it in a walled garden of one acre in extent, where it lived for about a year, getting over the winter. We left a few rows of peas standing, as it liked to go among them. It then disappeared,

<sup>1</sup> Mr. Heddle's father had a note of forty-five couple being killed by one gun in a day.

taken, I suppose, by a cat. It became fairly tame, but never familiar. It would not trouble itself to run much out of the way, and, if lifted, would sit quietly in the hand, but it never came to a person."

Mr. Monteith-Ogilvie sends us an account of the occurrence in Papa Westray of that variety of the common species known as Sabine's Snipe, which he unfortunately was unable to procure; this was in December 1889.

### *Gallinago gallinula* (L.). Jack Snipe.

A common winter visitor, at times arriving as early as the middle of September, though October is the more usual period.

### *Tringa maculata*, Vieill. Pectoral Sandpiper.

On August 26th, 1889, a Pectoral Sandpiper was shot at the loch of Burness, Westray, by Mr. F. Monteith-Ogilvie, who has kindly sent us a notice of it. Mr. Monteith-Ogilvie skinned the bird, and sent it to Mr. Gunn, Norwich, to be set up: here the bird was identified by Mr. J. H. Gurney, jun., who also came to the conclusion that it was an adult female. The body has been preserved in spirits.

As the Pectoral Sandpiper is a very rare bird in Scotland, we give the whole account as it appeared in the *Zoologist*.

"The Pectoral Sandpiper in Orkney.—On the 28th August I received a freshly-skinned example of the Pectoral Sandpiper, *Tringa maculata*, Vieillot, together with the body, for dissection, from Mr. F. Monteith-Ogilvie, and as this species is of rare occurrence in the British Islands the following particulars of its capture, kindly furnished by Mr. Ogilvie, will be of interest:— 'This bird was secured when Snipe-shooting round the edge of a loch in Westray, Orkney, Aug. 26th, 1889, strong W.N.W. breeze a week before. It rose in company with two or three full Snipe, without calling, and I imagined it was a Jack Snipe which had arrived earlier than usual. I shot at two of the full Snipe, missing the second one, and I then became aware that the bird flushed with the Snipe was calling a note which I did

not recognise ; it seemed to be a short double note, or perhaps a single one repeated twice in quick succession. I watched the bird, and after a long flight it pitched straight down, as snipe will generally do, into the rushes at the east end of the loch. I walked round, but finding the ground extremely boggy, took off my boots and stockings, and struggled along as well as I could, often sinking over my knees in the soft mud, towards the spot where I had marked it down. The "going" grew worse at every step, and just as I was about to turn back, fairly beaten, the bird rose behind me, and but for its curious call would have escaped. As it was, I could only turn round with the greatest difficulty, owing to both my legs being firmly imbedded in the mud, but a rather lucky shot brought it down, and without much further trouble it was brought to bag. The bird was thin and in poor condition ; unfortunately I was unable to weigh it, as the only obtainable scales had no weight under  $\frac{1}{4}$  lb. I took the following measurements :—length from tip of bill to end of tail,  $9-9\frac{1}{8}$  in., and from carpal joint to end of longest primary,  $5\frac{1}{4}$  in.; irides very dark brown ; legs and toes yellowish green, rather more yellow than green. I send you a sketch, showing colour a few hours after death, and the body of bird for dissection.' In plumage the bird appeared to be adult, having the arrow-pointed markings on the breast-feathers, the principal distinction between the adult and immature of this species (see *Yarrell*, 4th ed., vol. iii. p. 372). The tail consists of twelve feathers, the two centre ones extending about a quarter of an inch beyond the others. The legs, as stated by Mr. Ogilvie, were decidedly yellowish green, which differs from Mr. Saunders's description, who states these parts to be yellowish brown. The bird, on dissection, proved to be a female, the ovary containing a large number of minute eggs. The stomach contained remains of small coleoptera and grit.—T. E. GUNN (St. Giles Street, Norwich.)"

*Tringa alpina*, L. Dunlin.

Orc. = *Plover Page* (B. and H.)

Found on every island and holm we visited, breeding everywhere throughout the Orkneys, and nowhere more abundantly than

in Sanday, and at the south-west point of the island of Viera, where we obtained many nests. The Dunlin seems much commoner in summer than winter, comparatively few remaining through the latter season.

Mr. Moodie-Heddle sends us the following note :—

“This is a most interesting and intelligent bird. Hoy Lodge is about 220 feet above the sea and beside a small stream on the edge of a moor, and a pair or two of Dunlins breed close by. They get remarkably tame, and will sit on a piece of iron bar fence, close to a person working in the garden—within a few feet—uttering their curious piping cry. They show evident inquisitiveness as to the work being done. After the breeding season, should there be a gale, they will sometimes come to the windows at night and tap until let in. They are not, however, so tame as the Redshanks, which will, if put out again by hand at the kitchen door, return and force their way to the fire, until they are sure the gale is over. Of course I never kill or annoy these birds, and pass daily within a few feet of their nests.”

### *Tringa minuta* (Leisl.). Little Stint.

We have but few notes of this bird to give; though, probably from its insignificant appearance, it escapes the notice of any person but a naturalist, and may be commoner than is supposed.

The late Mr. Heddle left a MS. note that one was seen at Lopness in 1848.

Mr. Ranken informs us that he obtained four specimens out of a flock of about thirty small waders at Sanday in September, ten or twelve years ago (writing in 1888). They were feeding among the seaweed along the beach. He has never seen the bird since.

Mr. Monteith-Ogilvie sends us the following notes :—

“Aug. 24th, 1889.—Round the shore (of Papa Westray) to-day. Shot a Little Stint. . . . I don't think these Stints are very rare in Orkney; I am sure I have seen others since I have been here. I believe they escape notice with many others (Waders) amongst the large flocks of Ringed Plover, etc. Everything



below the size of a Whaup is massed together under the phrase 'one of those sma' birdies,' and is taken no notice of by the natives."

"The said 'sma' birdies,' that I saw, consisted of large flocks of Ringed Plover, with, rather to my astonishment, only quite a few Dunlins, perhaps one in a hundred. . . . Two Stints (I believe), together with a number of Ringed Plover feeding in a kind of muddy swamp just above high water; another feeding on the edge of the receding tide. These three birds were, I think, only wild through being in company with those wretched Ringed Plover. The one I did shoot I managed to separate, and then it was quite tame."

### *Tringa striata* (L.). Purple Sandpiper.

From the letters of some of our correspondents this species would seem to be considered by them only an occasional visitant to Orkney. On January 30th, 1845, the late Mr. Ranken killed eight at one shot from a mixed flock of Dunlins, Turnstones, and Ring Dotterel. Mr. Moodie-Heddle killed them at Melsetter in 1867, and has not seen any since.

When in Rousay in 1883 we considered the Purple Sandpiper as the most abundant of all the small waders, and it may be from its habit of always sitting on stones or rocks, and never, or at least very rarely, on sand or mud, that it is less noticed and killed by the shore gunner. Dunn notes it as common in the Orkneys, which agrees with our own observations.

Amongst a few birds that we saw in the house of Mr. Lennie, birdstuffer, Kettletoft, Sanday, was a Purple Sandpiper, and we also picked up a wing of one of these birds on the same island.

Mr. Millais has observed this species about the Black Craig, Stromness, as late as the end of June.

Under date of November 25th, 1889, Mr. Monteith-Ogilvie writes us:—

"Flights of Purple Sandpipers keep coming in from the east, as that seems to be where they are coming from. There were comparatively only a few that I saw about the shores till

this date, and now they are excessively common, often thirty or forty huddled together on some rock that the tide is just covering."

### *Tringa canutus* (L.). Knot.

Only a casual visitant to these islands. We have notes of their having been killed near Skaill in one or two instances, and also Mr. Irvine-Fortescue has seen them occasionally in the neighbourhood of Swanbister, but not for some years (1887). Mr. F. Boyes of Beverley also informs us that he killed a Knot at Stromness in the autumn of 1866.

Mr. Cameron, late of Burgar, has an immature specimen in his collection of Orkney birds. Mr. Monteith-Ogilvie saw three Knots at Papa Westray on August 17th, 1889, and shot one. He also saw a flock of about twenty in Sanday in December of the same year, and shot some half-dozen for eating.

### *Machetes pugnax* (L.). Ruff.

From all accounts a rare bird in Orkney. The late Mr. Ranken mentioned that he had shot both sexes in the islands. The latest killed, of which we have received a notice, was shot by Mr. Watt near Skaill at the end of September or beginning of October 1887.

In 1887 a pair of these birds was said to have bred at Tankerness. Mr. Cameron of Burgar kindly investigated the matter for us, and found out that this was a mistake, and that the pair of birds which had bred there, whatever they might have been, were certainly not of this species.

Mr. Millais informs us that as he was returning home to Stromness one evening at the beginning of August 1888, having expended his last cartridge on a Snipe, he came across a Ruff and two Reeves in some cultivated ground near Stenness. They were perfectly tame, and allowed him to come within a few yards of them.

***Calidris arenaria* (L.). Sanderling.**

A note by the late Robert Heddle, one of the authors of the *Fauna Orcadensis*, states that "the Sanderling has been observed in Sanday and Stronsay," and Mr. Harvey says that it is an occasional visitant to the former island.

Mr. Monteith-Ogilvie, when at Sanday in December 1889, found a good many Sanderlings with Dunlins and Ringed Plovers, and shot one for identification.

***Totanus hypoleucus* (L.). Common Sandpiper.**

Neither Low nor Dunn makes any mention of this species. Though not mentioned by Baikie and Heddle in their work as being more than an occasional visitant to Orkney, yet a MS. note left by the latter author shows that he became aware that the Common Sandpiper bred in the islands. Less abundant than it is in many parts of the Highlands, yet we met with this species on several occasions in Hoy, Rousay, and the Mainland. In this latter island Mr. Irvine-Fortescue pointed out to us the bird sitting on its nest, close to Swanbister. The nest was in a hole in a rather steep bank, its position thus differing in some degree from that in which we have usually found it in Sutherland.

Mr. Irvine-Fortescue informs us that he once flushed a Sandpiper off her nest after a heavy night's rain. The nest was filled with water, while the two eggs were up on the edge of the nest. The bird, finding the water rising in the nest, must have pushed the eggs up out of the nest, and then continued sitting on them.

***Totanus calidris* (L.). Redshank.**

Very common, and resident the whole year round, breeding abundantly through all the islands and holms. They are fond of haunting the grass-fields and damp meadows, the young ones, in such situations, lying as close as snipe. When flushed they show much more white, and that of a clearer colour, than the old birds. In winter they are fond of feeding in the same damp places near the sea as the snipe do, and, from never being shot at, are very tame.

We extract the following from a letter written us by Mr.

Moodie-Heddle in answer to a question we put to him in reference to the extraordinary tameness of this bird, mentioned in a former letter :—

“I think the Redshanks were attracted to the light of the kitchen window in the storm, and once inside, finding they were not injured, declined to face the gale again. The last occasion one came in was about three months since, when I was from home; the cook took it to the back-door, and it would not go out, but ran back past her to the kitchen. There it kept running about, but quite quiet, till, when she went to bed, fearing its doing damage, she placed a perforated wire garden-seat over it, which was just like a cage. The morning was fine, and when she let it out it flew away. I saw the same thing here nearly a year ago, and once before at Hobbister, with Redshanks. In both places they bred near the house, and kept about a stream within twenty-five or thirty yards of the door. The Redshank is *knowing*, and can look out for itself when shot at; but it is an intelligent bird, as any one will find out who attempts to stalk seals or plover, etc., near one. It not only *sounds* an alarm, but will, like the gulls, go and purposely alarm the object of pursuit.”

Mr. Irvine-Fortescue says he has frequently seen small flocks of from three to seven or eight Redshanks alight on the water and swim, especially amongst floating seaweed.

Once, in February 1888, the same gentleman saw several alight on the water, thirty or forty yards from the beach, and about the same distance from the nearest seaweed, the water at that place being three or four feet deep. They swam about for a minute or so, and then rose easily from the water and flew off. There was a considerable ripple on the water at the time.

### Totanus fuscus (L.). Spotted Redshank.

The only note we have of this species is, that one was sent by Strang to Dr. Duguid from Sanday in September 1849.

### Totanus canescens (Gmel.). Greenshank.

From what our correspondents write us, the Greenshank is a fairly common autumn migrant, but very rare in the spring.



Mr. Watt has shot several at Skail, always at the end of August or beginning of September; the last he got were in 1884.

Mr. Reid killed some in Sanday at the end of September 1863; and the late Mr. Strang of Lopness told Mr. Spence that he thought about twenty brace of these birds were annually shot in that island.

In the spring of 1883 we heard a Greenshank in Rousay, the only occasion on which we met with the species in Orkney.

### *Limosa lapponica* (L.). Bar-tailed Godwit.

Orc. = *Tang Whaup* (B. and H.).

We have received very few notices of the occurrence of this species.

Low in his *Tour*, page 51, mentions having shot several Godwits about the shores of Holm, "being not at all shy, and easily come at; this species is but scarce in Orkney, flying in flocks of a dozen, only seen in winter." This would most likely refer to the present species.

Mr. Watt has met with this species on the sands of Skail, but marks it as rare.

Mr. Harvey says it is an occasional autumn visitant to Sanday, and we saw a stuffed specimen in the collection of Mr. Denison of Brough in that island. Another was caught there on October 28th, 1878, by Mr. James Barnett, with its wing cut off by the telegraph wire.

There is also a Bar-tailed Godwit stuffed, and in the possession of Mr. Scarth of Binscarth.

Mr. Irvine-Fortescue shot one out of a flock of half-a-dozen, at Tankerness, on February 27th, 1885, the only occasion on which he saw the bird. The skin is now in his possession.

Mr. Monteith-Ogilvie shot a bird of this species in Sanday on December 4th, 1889, the only one he saw, but he was told they were common (probably during the migration).

### *Limosa ægocephala* (L.). Black-tailed Godwit.

[Obs. This bird is mentioned by Messrs. Baikie and Heddle as occurring in the Orkneys, but they give no dates or particulars.

As the species is so extremely rare in the north, we having only seen one sent in for preservation to Mr. Macleay in Inverness during many years, we prefer to include it in brackets, until we receive more satisfactory evidence.]

**Numenius phæopus (L.). Whimbrel.**

Orc. = *Little Whaup* (Low).

Low does not mention the Whimbrel in his *Tour*, though in his *Fauna* he appears to confound this species with the next.

Dunn in his *Guide* says both this and the Curlew are alike in manner and habits, they do not associate together, although he found their nests within shot of each other, and that they are equally numerous. As Dunn wrote his *Guide* for both Orkney and Shetland, it is probable he has here confounded both the birds and the places, at any rate later observation does not bear out his statement of the abundance of this species in Orkney.

In 1831, Salmon visited the Orkneys, and, in a paper he wrote for *Loudon's Magazine*, he says that Whimbrels bred sparingly in marshy places between hills in Hoy, but that on June 3d<sup>1</sup> they were too late for eggs, as they had hatched out; he supposed the young were concealed amongst the grass, as, though he could not find them, the old birds were very noisy overhead. The Curlew was not seen on any of the islands.

Messrs. Baikie and Heddle say it is a summer visitant, and nearly as common as the Curlew, but in a later note by one of the authors, he says: "much rarer, I have shot it in September often" this modifies the statement in the book to a very great extent.

Mr. Moodie-Heddle writes us from Melsetter:—

"Whatever may have been the case when Baikie and Heddle wrote, I should say now that you do not see one of these birds to twenty of the Common Curlew. It is very tame in the breeding season, and betrays the neighbourhood of its nest more than the Curlew, nor is it so bold in driving off other birds."

<sup>1</sup> From all accounts and our own experience, this is about the date when these birds are sitting.

In another letter the same correspondent says:—

“Finding a nest is somewhat uncertain, as so few breed here (Hoy). I have seen more on Roithisholm Head, Stronsay, at the breeding season, than elsewhere, *i.e.* I have seen three or four pairs one day, some years ago.”

Mr. Ranken says:—“A spring visitor, remaining to breed, leaving as soon as the young are able to take their departure.”

Mr. Watt writes us that he sees a few Whimbrels every year about spring-time on the links of Skaill, but he never saw either nest or young birds in Orkney.

Mr. Irvine-Fortescue sees a flock of half-a-dozen or so every spring of what he is sure are Whimbrels, but he never saw but one bird in autumn, and that was killed the end of August or beginning of September 1886. About 1868 he saw one or two pairs in Walls (Hoy), which evidently had young.

From what we have just written we think it is clear that the Whimbrel was never a really numerous bird in Orkney, and that it is slowly decreasing in numbers as a breeding species; this our own observations made last summer (1888) bear out. We ourselves only saw the Whimbrel on one occasion, and that was on Papa Westray on June 23d. Here we saw three birds, but none of them showed the slightest signs of breeding, and we hunted all the uncultivated ground, as well as we were able, to try and discover a nest. Four others haunted a field near Burgar on the Mainland, during the first half of June; one of these was shot and proved to be a female, with very small eggs in the ovary, nor did it show the slightest sign of having bred.

Mr. Moodie-Heddle told us he saw a pair of Whimbrels not far from Melsetter in 1887, which evidently had young, but none came to the place the next season, as we went to investigate for ourselves. Risa Little, an island lying close to Hoy on the north side, has also been mentioned as a breeding-place of the Whimbrel, and Mr. Millais informed us that he saw two there in 1888, but they did not remain to breed. Within the last few years a very large colony of the Common Gull has taken possession of this island, so that possibly they may have driven the Whimbrel away.

On July 4th, 1888, we landed at Roithisholm, Stronsay, and carefully went over the greater part of the uncultivated area, which consists to a large extent of stunted heather, in the hopes of finding Whimbrels, but never saw the sign of one. At another time we went, accompanied by Mr. E. S. Cameron of Burgar, to a place near Tankerness, where Mr. Cowan said these birds used to breed commonly, but again the result was only disappointment. We were, however, shown an undoubted Whimbrel's egg, which Mr. Cowan informed us had been taken on the Mainland.

Mr. Harvey informs us that Whimbrels are autumn visitants to Sanday.

In June 1889, hearing from Mr. Heddle that the Whimbrels had returned to their old spot in Hoy, we went over to look for the nest. We soon found the birds, and, after watching them for some time, came to the conclusion that they had hatched off, and we found what we took to be the tracks of the young birds in some soft ground. The old birds were very tame, much more so than the Curlew, and ran almost within a few yards of us, uttering the regular Whimbrel note; when doing this, the bird lowered its head almost on a level with its body.

### **Numenius arquata (L.). Curlew.**

Orc. = *Stock Whaup*. *Whaup*.

The Curlew is a decidedly scarce bird in the breeding season throughout Orkney. Low in his *Tour* mentions seeing many Curlews when going through Hoy in May 1774, but in no other place. Dunn's statements, as before mentioned under Whimbrel, are too vague to be taken much into account, 'rather plentifully distributed,' as regards Orkney, being hardly applicable to this species at the present time.

Mr. Ranken says Curlews are numerous, remaining throughout the year; and they nest in the Birsay and Harray hills, according to Mr. Watt of Skail.

Mr. Irvine-Fortescue, however, sends us more positive and definite information; referring to the parish of Orphir he says:—

"I have heard of three, possibly four, nests in this parish. One on May 7th, 1887, on Swanbister, found by Mr. Halcro;



one 1886, Kirbister, and also probably another on Swanbister, by W. Halcro; one 1885, on Hobbister. Before that I never heard of it breeding in this parish."

To this we can add another instance of a nest taken in, or close to, the same parish in 1888. Miss Flower, then residing at Smoogroo, near Swanbister, told us that a herd-boy had taken a Curlew's nest with either three or four eggs, which, of course, he had eaten, in May of that year. So interested was Miss Flower in this, that she took the trouble of going to see the empty nest, which she described to us, and which was no doubt a Curlew's. From these remarks it will be seen that the Curlew is not a common breeding species all through Orkney.

In Hoy the Curlew is much commoner, and whereas, in the Mainland, we ourselves never met with it during the breeding season, in the former island we saw several pairs that evidently had eggs or young. This, however, was the only place where we found it breeding, though we saw stray birds here and there through the islands in June, and by the beginning of July, on at least two occasions, we saw a considerable flock. In autumn and winter this species is common enough along all the coasts.

Mr. Moodie-Heddle tells us he has often seen the Curlew drive off Richardson's Skua, and, rushing up behind it, give it a "prod" with its long bill. In spite of its long, awkward-looking bill, the Curlew eats quantities of the "Hill-berry" (*Empetrum nigrum*), and is also very fond of swedish turnips, when it can get at them through the skin being broken in any way.

In 1883 Buckley saw a cream-coloured Curlew on the island of Gairsay.

Mr. Reid, innkeeper, S. Ronaldsay, informed us that, some six or seven years ago, when hunting for an owl's nest in Orphir, he saw six pairs of Curlews in the air at once, which he thought were all breeding; he, however, was not successful in finding a nest.

In the collection of Mr. E. S. Cameron of Bargar is the

largest Curlew we have ever seen. The dimensions of three are here given to show the variation of size in this species :

	Length, exclusive of Bill.	Wing, from Carpal to end of Longest Feather.	Bill.
♂	14 $\frac{1}{2}$ ins.	11 $\frac{5}{8}$ ins.	4 $\frac{1}{8}$ ins.
♀	16 $\frac{5}{8}$ "	12 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "
♀	17 $\frac{1}{4}$ "	13 "	6 $\frac{3}{4}$ "

Mr. Laird, a shoemaker in Kirkwall, and who in his spare time collects eggs, told us that, until the year 1889 he had never seen a Curlew on the Orphir hills, but that during this season, while hunting for a nest of the Short-eared Owl, besides a small flock of non-breeding birds, he saw several pairs which, from their actions, he was sure were breeding.

## Order 5. **GAVIÆ.**

### Family **LARIDÆ.**

#### Sub-family **STERNINÆ.**

In writing about the terns of Orkney the same difficulty exists here as elsewhere, viz., the almost impossibility of distinguishing the Common and Arctic Terns on the wing, or at even a short distance, unless by any one who has made these birds quite a speciality. Not caring to carry a gun over the islands without the sanction of the proprietors, we never procured any specimens, and with a glass, even at short range, it is not easy properly to identify them. All those, however, about which we are quite certain had the whole bill coral-red, but the number of colonies, many of which we were unable to visit, is so large, that there might well be plenty of the so-called Common Tern, especially when we remember that both species breed on the Pentland Skerries.

Speaking of Orkney terns generally, Mr. Morgan, writing in the *Field* of October 22d, 1881, mentions that the tern is

"never seen to arrive, always coming when the weather is thick. This year, instead of leaving in August, a large flock was seen to pass over Kirkwall, going to the south-west, on October 5th. This bird being so long in leaving, it is predicted by old men as a sure sign of fine weather for some time."

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*Sterna macrura*, *Naum.* Arctic Tern.

Orc. = *Pickatarre*.

A very abundant summer visitant, breeding more abundantly on the smaller uninhabited holms than on the larger islands.

From a number of notes sent us by Mr. Irvine-Fortescue, the terns appear to arrive with remarkable punctuality between the 15th and 17th May, there being only one record as early as May 6th. They rarely commence to lay before the first week of June, and our experience of these birds in Orkney is that they oftener lay two than three eggs. But out of seventeen nests found by Mr. Irvine-Fortescue on the "Barrel of Butter" nine contained the full complement of three. Their nests in many places are so constantly harried that the young birds can scarcely get off before the first week in August. The largest colony we saw in 1888 was in Glimpsholm, and, on July 5th, few nests contained more than one or two eggs.

As is now well known, terns are very "shifty" as regards their breeding-places. Not far from the house at Melsetter is a flat, on which, twenty years previous to 1888, no Terns had bred. About that time a colony took possession of it, and bred for fifteen successive years, when they deserted the place. While on a visit there in 1881, Mr. Heddle told us this about these terns, but on visiting the place together on May 30th, to his astonishment, we found a few pairs had returned to their old quarters, and, on a subsequent visit, their numbers had largely increased. This is probably the only colony in the whole of Hoy.

In Sanday, terns breed commonly all over the wet and uncultivated parts of the N.E. of the island, less so in colonies than in most other places.

*Sterna fluviatilis*, *Naum.* Common Tern.

Orc. = *Pickatarre*.

From what we can gather, either from our correspondents or from books, the first undoubted record of the true Common Tern from Orkney is that by Crichton, in 1860, who, in his *Rambles in the Orcades*, page 81, expressly mentions killing both species of tern at the Loch of Stenness.<sup>1</sup>

Mr. E. S. Cameron informs us that the Common Tern breeds both on Eynhallow and the island of Damsay; there are also smaller colonies on the holms in the loch of Groundwater, in the parish of Orphir, at which place Mr. Cameron has procured both the birds and eggs. Mr. Monteith-Ogilvie found this species breeding in 1890, at Holland Head in the east of the Mainland.

*Sterna minuta*, *L.* Little Tern.

[*Obs.*—The statement by Messrs. Baikie and Heddle that this species is not uncommon in Orkney, and is often observed in Sanday in the breeding season, has not been confirmed by any of our correspondents except Mr. Spence, who states that he took eggs of the Little Tern on an island in Damsay Sound. We ourselves have never seen this Tern there.]

*Sterna cantiaxa*, *Gm.* Sandwich Tern.

On June 14th, 1888, Buckley paid a visit to the island of Damsay, near Finstown, and, amongst many Arctic Terns and Black-headed Gulls, he distinctly recognised a pair of Sandwich Terns, being attracted by their note; he was, however, unable to find their nest, which, it is quite possible, may have been robbed by some men who had landed on the island, without the proprietor's leave, and gathered some eggs a day or two previously. The birds were not seen by us the following year.

<sup>1</sup> In a note under "Common Tern" the late Robert Heddle remarks, "Mr. Dunn is right; the Arctic is the commonest Tern in Orkney." No doubt Heddle was misled by the word "common," which he applied to the commonest species of tern he met with, i.e. the Arctic. The adjective "common" has, we think, in several cases been woefully misapplied in other cases than this. Witness the "Common Skua," certainly not the commonest species of its genus in the British Isles.



Sub-family *LARINÆ*.

Gulls may almost be termed the staple commodity in birds in Orkney, and notwithstanding their constant persecution at the nesting season, still fairly hold their own, if, indeed, some species may not be increasing, as the Common and Black-headed Gulls.

Gulls have certain places on which they sit, and these may be known by their green appearance, even amongst heather. The reason of this seems to be that the gulls cast up the husks of corn, on which they have been feeding, on these spots, and this acts as a sort of manure to the ground. Mr. Moodie-Heddle informed us that in Hoy there are nearly 120 acres thus used, and that the castings represent many quarters of corn.

Gulls swallow large quantities of mussels, which their gizzards break up easily, the remains of the shells being found in their castings; they also swallow "buckies,"<sup>1</sup> but these shells are cast up whole.

Enormous flocks of gulls are to be seen here and there throughout the islands, even during the breeding season. Such a flock we saw on Papa Westray, the birds composing it at first sight seeming to be nearly all adults; a closer inspection, however, showed them to be all, or nearly all, immature; many of them being in most interesting stages of plumage.

*Pagophila eburnea* (*Phipps*). Ivory Gull.

In addition to the specimens mentioned by Messrs. Baikia and Heddle, our friend Mr. Reid informs us that one was shot by Mr. Ranken, Kirkwall, in 1849.

Regarding the one killed by Strang in the Bay of Firth, the late Robert Heddle has this note: "Run off with by James Sinclair," probably the birdstuffer living at Kirkwall at that time.

Mr. Moodie-Heddle informs us that an Ivory Gull was kept alive at Melsetter, but gives no date. This may be the one mentioned by Gray in his *Birds of the West of Scotland*, p. 481.

<sup>1</sup> Buckies: *Anglicè*, Periwinkle.

Mr. T. S. Peace, Architect, Kirkwall, informed Mr. Ranken that he has seen two specimens of this gull which he tried to shoot, but in each case was unsuccessful. One bird was in the Bay of Firth, the other in the Peerie Loch, close to Kirkwall.

Mr. Millais informs us that an immature Ivory Gull was shot at Longhope by Mr. Robertson, in December 1886, and stuffed by Mr. Begg of Stromness.

Some fishermen informed Mr. Monteith-Ogilvie that they saw a white gull on the beach at Papa Westray, while he was there in December 1889. They described it to him as half-way in size between a Kittie (Kittiwake) and a "White Maa" (Common Gull), and all white, with no black on the wings: the Common Gulls kept mobbing it and driving it away. This would most likely have been an Ivory Gull.

A later communication from Mr. Monteith-Ogilvie informs us that an Ivory Gull, most likely the same bird just described, was shot in Pierowall Bay, Westray, by Henry Drever, on December 9th, 1889. It appears to be an immature bird, as there are a few black spots on the back, only two or three on the breast, the tips of the primaries are black, a few black feathers on the head, and the little feathers round the gape are slate-coloured.

### *Larus ridibundus*, L. Black-headed Gull.

Orc. = *Rittock*. *Hoodie-craw* (Low; and this name has been perhaps imported from Caithness).

Observed by Low as breeding in S. Ronaldsay, and is a numerous and resident species at this present time. In 1888 we visited many breeding-places of this gull, the largest colony being in N. Ronaldsay. On the islands of Damsay and Eynhallow the Black-headed Gull breeds in the driest places, some of the nests on the latter island being quite as exposed as, and far less carefully constructed than, those of the Common Gull. On a small artificial island in the Loch of Skail, these birds breed so abundantly that it is almost impossible to put one's foot down without treading on their eggs.

On February 29th, 1888, Mr. Irvine-Fortescue noticed these gulls in all stages of assuming their black heads; he also

observes that, next to the Herring Gull, this is the commonest gull all the year round in the Orkneys.

Mr. Cursiter informs us that there is a large colony of these birds breeding at the Loch of Sandwick, on the Mainland. We visited Damsay Island again in 1889, and, to our astonishment, did not see a single one of this species breeding, or indeed, on the island, where the year before we had found such a fine colony.

In *Loudon's Magazine*, Salmon mentions the Black-headed Gull as breeding in Hoy, though not very numerous, and that it invariably lays *four* eggs. At the present time we know of no breeding-place of this bird in that island.

#### *Larus minutus*, *Pall.* Little Gull.

[*Obs.*—In reference to the Little Gull whose capture was reported in *Land and Water*, of March 6th, 1886, near Kirkwall, we have a note from Mr. T. Ranken saying that he examined the bird at Dr. Stewart's house, in whose possession it is, and he "finds it to be a Black-headed Gull of the second year, and probably a female."]

#### *Larus canus*, *L.* Common Gull.

*Orc.* = *White Maa.* *Sea Maa.*

Very abundant and resident. During the breeding season this species does not restrict itself so much to the smaller holms and other out-of-the-way, or less accessible spots, as do some of the other gulls; nor does it, to our knowledge, breed in any of the cliffs of the islands. This is one of the species that appears to be on the increase. There was, in 1888, a very large colony on the island of Risa Little, which, we were informed, was a new one; we saw quantities of these birds flying or resting on that island on our way from Melsetter to Hoy.

Mr. Moodie-Heddle informs us that he had a tame Common Gull which flew for years among the wild ones; to prevent its being shot by mistake, it had a piece of black ribbon tied round one leg. It and a Herring Gull used to fly down from the

garden with the under gardener, who used to feed them when young, and roost all night on his house, flying up again in the morning. This bird was also quite aware it would not be shot at, and was not at all alarmed at the report of a gun: it would hover within twenty yards after a shot, as if to see the result.

Salmon reports the Common Gull as only breeding in Hoy, it was not numerous there, and only laid two eggs. (*Loudon's Mag. Nat. Hist.*, vol. v. pp. 415-425.)

### *Larus argentatus*, Gmel. Herring Gull.

Resident, and perhaps even more abundant than the last-named, and in this all our correspondents are agreed. They breed indifferently in rocks or on the ground, round the edges of lochs, on the islands therein, or on the bare hill-side.

The Herring Gull is very noisy in March and April, and its note is always connected in our minds with the commencement of spring in the Highlands.

This species turns over clods of earth both for grubs and grain, and at the same time scratches with its feet for the latter. Mr. Moodie-Heddle informs us he has had to re-sow some three or four acres on that account.

Mr. Irvine-Fortescue sends us the following curious incident. "Mr. Halero once saw a Herring Gull fall from a considerable height, near Swanbister House. It lay a short time, then got to its feet, and struggled backwards with its head low down. It at last got rid of two eels which measured 21 and 15 inches respectively. Each had been swallowed with a double about the middle, and the head of the larger was considerably digested. On getting rid of the eels, the gull rose and flew off."

### *Larus fuscus*, L. Lesser Black-backed Gull.

A summer visitant, and, excepting in one or two localities, by no means a numerous species, indeed, in our experience, the rarest of all the more ordinary Laridæ with the exception of its larger cousin.

Although a few pairs are scattered here and there throughout



the islands, we have found them numerous in two places only, Walls in Hoy, and in Rousay. In the latter island it is becoming much scarcer on account of the war waged against it by the keeper.

In Walls it is abundant, breeding about some of the hill lochs, and on many of the lesser ridges, where we have often seen their nests.

Writing us, under date of June 1889, Mr. Moodie-Heddle says: "Here (referring to Hoy) any one can create a breeding-place of the Lesser Black-backed Gull by burning a large tract late in the season: the Gulls then come on the bare ground through the following summer and autumn to catch moths and winged insects *which have no heather left to go down into*. They then usually begin to breed on the tufts of white moss left unburnt, the following season. The breeding-places by the Water of Hoy, and down to Pegal Burn, were thus formed by accidental fires. No gulls bred there for many years before, and we could kill 60 or 70 brace more grouse."

The statement by Messrs. Baikie and Heddle that this species is commonest in winter is not borne out by our valued correspondent Mr. Irvine-Fortescue, who expressly states that he never saw one at that season. He notes that none had appeared about Swanbister by the end of February 1888.

### *Larus marinus*, L. Great Black-backed Gull.

Orc. = *Black-backed Maw*. *Swartback* (Low).

Resident and widely distributed, there being few islands that have not a pair or two of these fine birds breeding on them.

On an island in the Loch of Swannay Mr. E. S. Cameron of Burgar informs us that there is a large colony of this species breeding, and that they are so numerous there that twelve dozen eggs have been taken at one time. The nests are situated in the midst of bunches of yellow king-cup, nettles, wild sorrel and rushes, and are made of dried grass and stalks. This is the only colony known to us, but Mr. Millais informs us that there is another on Skerry.

**Larus glaucus, *Faber*. Glaucous Gull.**

Since Messrs. Baikie and Heddle wrote their book one or two more specimens of this gull have been got in Orkney. The late Mr. Ranken shot one on June 22d, 1849, and presented it to the Kirkwall Museum. At page 90 of his *Rambles in the Orkades* Crichton mentions one shot by Dunn from the carcass of a whale, in or about 1860. Another, in the collection of Mr. Buchanan of the National Bank, Kirkwall, was shot at Sanday by Mr. Barnett, Crown Chamberlain.

Mr. E. S. Cameron sends us a note of one killed near Kirkwall in the autumn of 1886: and Mr. Millais has a specimen in full summer plumage killed at Skaill in April 1880.

Buckley's keeper shot a fine adult in Rousay on Oct. 10th, 1883, and one or two were seen after that, but not many.

From this it would appear that neither this nor the Iceland Gull, next in order, are such common winter visitants as might have been expected.

**Larus leucopterus, *Faber*. Iceland Gull.**

An infrequent winter visitant. We have notices of several that have been shot or observed in Orkney, and we have seen one or two stuffed specimens, both adult and immature, in different private collections. A good many of these have been obtained in the island of Sanday, and, writing in 1888, Mr. Harvey tells us "only a few are to be seen in winter." On July 11th, 1883, Buckley saw one adult Iceland Gull on a skerry not far from Kirkwall. Its remaining on the rock after the other gulls had flown away drew his attention to it.

**Rissa tridactyla (*L.*). Kittiwake.**

Orc. = *Kittick* or *Kittock*.

To enumerate all the breeding stations of the Kittiwake in Orkney would be a waste of time and of no practical utility. They may be said to breed in all the islands that have suitable localities for them; perhaps one of the largest colonies, as well as the best known, being that in the island of Copinsay, where,

as we sailed past in Harvie-Brown's yacht, we saw these birds with our glass come out of the cliffs like a great snow-drift.

We think, however, that the following facts, as told us by competent observers, may prove of great interest and even of novelty to most people. We quote *verbatim* the notes sent us by Mr. Watt of Skaill on this species, the loch, which is fresh water, and the locality referred to, being close to his house and on his own property: "The line of flight of this gull in the nesting season is close to the house. When building their nests it is a constant flight from early morn until late at night, taking a track one way coming from the headlands, and another returning. They pick up a fresh-water weed, that is thrown up on our loch, for the purpose of making their nests soft and comfortable. When their young are out the same flight continues to and fro. I concluded that it was with food for their young, so shot one to see what it was. The crop was full, and on opening it, was astonished to find a mass of Daddy-long-legs, like, at first sight, a ball of worsted. I have never again shot one, and request others not to touch them."

The following is from Mr. Irvine-Fortescue, and, however strange the fact may appear, we ourselves have no doubt that that gentleman was perfectly right in his identification of the species: "I once saw a pair (of Kittiwakes) in July which had a nest with two young birds on the island in the loch of Skaill, a most unusual site, I should think, for the nest of a Kittiwake. The parent birds had *dark legs and feet*, so I could not have mistaken them for the Common Gull."

We extract the following from Buckley's *Diary*: "June 12th, 1888 (Loch of Skaill). The most curious sight to me was to see numbers of Kittiwakes resting on the loch, which is about 300 yards from the sea, the two nearest breeding-places being one and three miles off. Mr. Watt, however, tells me he has occasionally seen a pair breeding on the island with the Black-headed Gulls. I questioned him particularly about this, and he was quite positive."

The following notes were made by ourselves in Rousay during the season of 1883, and were partly published in the *Proceedings of the Glasgow Natural History Society*: "Before beginning to make their nests the Kittiwakes do not frequent the rocks much, but sit in flocks on the water just below. When forming their nests one bird seems to remain at home to guard the materials collected,

generally sea-weed of some sort, while the other forages for it. As soon as the bird arrives with the weed it drops it on the ledge, and the other takes it up in its bill, places it where it wants it, and then stamps it down. After a short rest and a few little interchanges of an amicable nature, the first bird drops lightly off the ledge and flies off for more material. Every now and then a bird will commence its cry of 'Kitti-ake, Kitti-ake,' which is taken up by the others near it until the noise is quite deafening. A stranger lighting near the nest of another bird is instantly driven off, and this occasions another outcry of 'Kitti-ake.' A bird in immature plumage, but not of the year, was not allowed to land on the ledges, but was driven off immediately it tried to settle. This was the only immature bird seen until the young began to leave the nest."

"The young Kittiwake is fed in a manner something similar to a pigeon. The old one arrives and sits on the edge of the nest, its neck largely distended with food, remaining there for some time as if ruminating. Presently she puts her head down and shakes herself, probably as soon as she feels the food is





sufficiently macerated; she then opens her mouth, and the young one puts its bill into hers, and takes out the food, and this is done until it is satisfied. The old bird never feeds the young until she has sat some time on the ledge, however importunate it may be, no doubt because she feels the food is not in a fit state for it to digest easily."

In 1889 we again visited the Loch of Skail, and saw, as before, hundreds of Kittiwakes, some on the shore, some on the water, others again sitting on the stones of which the small artificial island is composed. They kept rather apart from the colony of Black-headed Gulls which were breeding on the island, sitting on the stones outside their breeding zone.

Sub-family *STERCORARIINÆ*.

*Stercorarius catarrhactes* (L.). Common Skua.

A very uncommon visitant to Orkney. Messrs. Baikie and Heddle only mention two instances of its occurrence, and since then it seems to have been very rarely observed. Strang of Lopness had a tame one, caught at sea, and having the webs of its feet cut when taken. Writing from Sanday in 1888, Mr. Harvey says they are very seldom seen there; but that three years before two Skuas killed some tame ducks on the loch at Northwall.

Mr. Moodie-Heddle saw a Common Skua off Stromness in November 1887, and another a few days after at the same place.

*Stercorarius pomatorhinus* (Tem.). Pomatorhine Skua.

Apparently a very scarce bird here. One shot in Rousay on November 7th, 1881, was sent to Mr. Small, Edinburgh, for preservation. Another was shot on the same island by General Burroughs' keeper in 1886.

Mr. Moodie-Heddle killed a Pomatorhine Skua at Longhope in the winter of 1880-1, which was shown at the Fisheries Exhibition in Edinburgh; it was given to Bailie Peace, Kirkwall.

On this Skua Mr. Millais writes us:—"An occasional autumn visitor in October. One was chasing a Kittiwake in the harbour of Stromness, and in its excitement dashed up against one of the lamps on the pier, and stunned itself. It was picked up by a boy and given to Mr. James Sutherland, who gave it to a tourist. The Pomatorhine Skua *bred, or was supposed to have bred*, in Hoy, along with Richardson's Skua, up to about 1860, but after that it does not appear to have been there. Mr. Begg tells me he recollected the species well."<sup>1</sup>

We have italicised the above words ourselves, and for our reasons we refer our readers to page 151 of *A Fauna of the Outer Hebrides*, where it is stated that the Pomatorhine Skua in fully adult plumage occurs not uncommonly on the west coast there, but does not breed.

### **Stercorarius crepidatus (Banks). Richardson's Skua.**

Orc. = *Scoutie-allan*.

Low remarks that this is a common bird during the summer, but he never saw the nest, from which we may conclude that it did not breed on the Mainland, or at least not commonly, in his day.

Dunn, in his *Guide*, gives the holm of Eddy (Eday) as the principal breeding-ground of this species in Orkney, but, from what we could learn, none breed there now. Curiously enough, Dunn makes no mention of their breeding in Hoy.<sup>2</sup> In 1831 Salmon took a nest of Richardson's Skua in Hoy, as stated in his Diary.

In a letter dated October 7th, 1840, Sheppard wrote Heysham that this species was then very common in the neighbourhood of Stromness, and that he had shot many there.

Dr. J. F. McConaghy informed Mr. Spence that a specimen of this bird was shot in Sanday in 1881. The Doctor adds:—"Regarding this bird David Lennie, birdstuffer, Sanday, who has a wide and accurate knowledge of Orkney birds, tells me

<sup>1</sup> See under Buffon's Skua. Mr. Begg seems to have confused his birds.

<sup>2</sup> Unless indirectly, *vide* p. 63 of his *Guide*.

that it formerly bred in the south end of Sanday, on the farm of Store, but that, with the present exception, he has not seen one, even on the wing, for years."

When in Orkney in 1888 we made special inquiries about this bird, and from what we could gather from others, and from our own observations, Richardson's Skua now only breeds in the island of Hoy, and even there is limited to the parish of N. Walls. Here they are abundant, several pairs being generally found in pretty close proximity, and very often establishing themselves amongst a colony of gulls, with whom they live peaceably enough at their breeding stations. Odd pairs may be found living by themselves, but, from our own observations, in Hoy they seem to prefer company. The vexed subject of the different plumages of this skua has been gone into often enough, and we need here only remark that our own observations fully bear out what has already been said, viz., that a black or white bird may be indifferently male or female.

While the eggs are fresh, the birds are by no means anxious about them, unless one is accompanied by a dog, when they are bold enough, but on only one occasion were we swooped down upon when taking the eggs by ourselves.

All our nests were taken by either watching the old bird go on to her eggs, or seeing her head amongst the grass and heather whilst sitting on the nest; and on few occasions, except by stalking, did we get nearer than two hundred and fifty yards or thereabouts, before she left her nest. On one occasion, after robbing a nest, we lay down within sixty yards of it to watch for another, and while lying there the old bird came and sat on the empty nest. When disturbed off their nests the old birds have a habit of sitting on the ground, and flapping their wings like a Starling when whistling. So common are these skuas in this locality that Mr. Heddle informed us he killed sixty in one season, and that next year he could see no decrease in their numbers. These birds were killed for the sake of the grouse, as skuas harry and drive them off, they being great destroyers of eggs and young. Indeed, only this last August (1888), Mr. Moodie-Heddle wrote us that, having flushed a covey of grouse, a skua made a pounce on one which it luckily missed by the

grouse taking the heather at once. We may as well state here that, as long as the skuas keep to their own ground, Mr. Moodie-Heddle does not allow them to be interfered with, as he is a strict preserver of all wild birds and beasts, as long as they do not unduly increase, and thereby do damage to others.

In Sanday, Mr. Harvey writes us, Richardson's Skua is seen in spring and autumn.

In a paper on Orkney birds written by Salmon (1831), for *Loudon's Magazine* already referred to, under "Arctic Gull" that gentleman says: "This we observed on every island, but their principal breeding places were Hoy and Eday." Personally, we could obtain no certain information of their having bred anywhere else than in Hoy.

### *Stercorarius parasiticus* (L.). Buffon's Skua.

Apparently a very rare visitant to Orkney. One was obtained in June 1849, by Hubbard in Sanday, eating worms. This instance is recorded in a MS. note left by the late Robert Heddle.

On June 16th, 1881, a fine pair of these birds was shot in Orkney, and sent to Sergeant Sandison, Wick, for preservation; they are now in the possession of Mr. W. H. Doeg, Manchester. They were wrongly described by Mr. W. Reid, in *Land and Water*, as Gull-billed Terns.

[*Obs.*—Mr. John Begg, Stromness, informed us that the Buffon's Skua once bred in Hoy, and Mr. Moodie-Heddle kindly interviewed Mr. Begg for us, and has sent us the following statement:—

"Begg, however, described the bird very closely, the extreme length of tail—and the wing looking narrower when flying—and the bird somewhat smaller. He said this flight was so different from the Richardson's Skua, that any one who was accustomed to birds, and had once seen them, could pick them out easily by that alone."

"He compared its flight to that of a Peregrine Falcon. He said he thought it would be about thirty-five years ago since they made their appearance—about a dozen of them, I understood him to say—and they bred for four or five years on the wettest



flat to the north of the Summer burn. (This is the farthest north station in the island (Hoy) now, of Richardson's Skua.)"

"The Buffon's Skua then suddenly left."

"He (Begg) had secured about four Skuas during that time, the most of which Hubbard had, he thought."—J. G. M.-H., *in lit.* May 8th, 1890.

We give Mr. Begg's information in full, as, as before-said, we wish to do full justice to all the information we receive. According to Saunders, the farthest south breeding limit of this species is  $62\frac{1}{2}^{\circ}$  N. Lat., but the great bulk breed well in the Arctic Circle. We have tried, with Prof. Newton's help, to trace some of the specimens shot by Mr. Begg and sent to Hubbard, but quite ineffectually.]

## Order 6. **TUBINARES.**

### Family **PROCELLARIIDÆ.**

*Procellaria pelagica*, L. Stormy Petrel.

Orc. = *Alamonti*. (Low).

Low records the Stormy Petrel as breeding in Orkney. Amongst other localities which he gives is Hunda, but this of late years it seems almost to have deserted, as Mr. C. H. Warne informs us that, in 1890, he could only obtain two or three eggs there with the greatest difficulty, and after a two days' search. Mr. Irvine-Fortescue has seen a few of these birds occasionally in Scapa Flow, sometimes four or five together.

The Stormy Petrel breeds not uncommonly in various other places, either under the loose, rather large stones on the shore of the smaller holms, or in the crevices and holes in the peaty soil which forms the top of these islands, the entrance being usually, in the latter case, overhung with grass. One's nose is a sufficient guide to find the places the petrels are inhabiting, and it is little or no use searching for their eggs when the strong odour of these birds cannot be perceived. Strangely enough the grass seemed little disturbed by the birds going in and out of these places. The note, which we often

heard when searching for eggs, is peculiar, and may be pretty accurately rendered by the syllables "ti-tee-tik," repeated several times in succession.

*Procellaria leucorrhoa*, *Vieill.* Leach's Petrel.

[*Obs.*—We have no actual record of specimens of this bird being obtained in Orkney, but both Mr. Moodie-Heddle and his father suspected that the bird occurred, having, as they thought, seen it following other petrels with a N.W. gale.

Seeing that this petrel breeds not uncommonly in some of the islands of the Outer Hebrides, its presence in Orkney might be reasonably suspected.]

*Puffinus anglorum* (*Temm.*). Manx Shearwater.

Orc. = *Lyrie*.

We find Wallace mentioning the "Lyre" as "very fat and delicious—so fat as you would take it to be all fat." He also adds, "They roast it with the guts on a spit, that it may cut the pleasanter (for it hath something of a fishie taste), and they sprinkle it with ginger and vinegar."

Low in his *Tour* mentions seeing Shearwaters in Hoy and S. Ronaldsay.

Salmon met with the Shearwater in Hoy, in 1831, and thus writes in his *Diary*, June 1st:—

"The Shearwaters (*Procellaria puffinus*) select similar situations to the last (Puffin) for the purpose of depositing their single egg. They are more difficult of access, as they make their hole nearer the water-edge. We could not obtain more than one single egg—and the old bird. (The man who took this) informed us that the rats destroy a great many, and that they are becoming very (rare) there."

Mr. Moodie-Heddle sends us the following notes on this bird, and, as they breed commonly on his property, he has ample opportunities of watching them, and so we give them *in extenso*:—

"This bird goes out so early and returns to land so late, that it is more numerous than is supposed. I have found it breeding

at Roithisholm Head, Stronsay, and at several places in Hoy. I am almost certain it will be found breeding in Rousay,<sup>1</sup> if properly looked for. The young are esteemed a great delicacy. The Earls of Derby had them preserved for eating at the Calf of Man. We have them reserved in the old Melsetter charters."

"The fishermen say they skim the 'soil' off the water, and carry it home to their young, collecting it off their breasts. This possibly has something to do with the English name, and the Orkney (Norse) name 'Lyre'=soil, or mud washed down (fat mud-banks). Lyrwa=Lyrvoe, *i.e.* The Bay of Silt or Mud. Lerwick=Lyr-wick=Mud Bay."

Mr. T. W. Ranken informs us that he has seen both dead and living specimens of this bird in Orkney, the latter in the neighbourhood of Flotta.

Probably Shearwaters are not so numerous now in Hoy as they were, as it is said that wherever rats can obtain access they drive them out. When in Hoy in 1888 we went over to Rackwick with a cragsman, for the purpose of getting some Shearwaters' eggs: we only obtained three and the three old birds, which latter the man brought up with their necks broken, against our expressed wish that they should be spared. Some holes had been cleaned out but left on account of the wet getting in, "Lyres," as the man said, being very impatient of wet at their nests. We met with Shearwaters nowhere else during our visit to the Orkneys in 1888.

[*Obs.*—Harvie-Brown, when in Orkney in July 1889, saw a few Shearwaters; and *one* of large size and dull colour passed within 200 yards of the yacht, but his view of it was much restricted owing to the deep troughs of the sea. He did not think it was a Manx Shearwater.]

### *Fulmarus glacialis* (Linn). Fulmar Petrel.

Since Messrs. Baikie and Heddle published their book in 1845 several more specimens of the Fulmar have been obtained.

The late Mr. Heddle of Melsetter shot one at Scapa on June

<sup>1</sup> We certainly did not observe it at any time of the year during our residence there in 1883.

22d, 1850. Mr. B. Ranken shot one at Græmeshall, Holm, in February 1860, which he presented to the Kirkwall Museum. Mr. Moodie-Heddle got one in the Pentland Firth in the summer of 1872, and has since seen several at sea to the N.W. of Hoy Sound.

Mr. Harvey tells us that Fulmars or "Mallimacks" are seen near the coast of Sanday in July.

Mr. James Barnett, Crown Chamberlain, found a specimen lying dead in Pickagarry on October 18th, 1877, killed by striking the telegraph wire in a storm the previous night. Another was caught in Sanday in February 1883 (Spence).

Harvie-Brown saw a solitary Fulmar in July 1889, which circled once round his yacht when on a visit to Stack. It had the grey mantle with slightly darker markings on the back.

## Order 7. **A L C Æ.**

### Family **ALCIDÆ.**

*Alca torda*, *L.* Razorbill.

Orc. = *Auk*. Bankie (Low).

A common summer visitant, breeding in most of the islands suitable to them. A few remain the winter, or at least as late as the beginning of December, as on the 8th of that month in 1883, Buckley shot two which were either immature or in winter plumage. The bill was much smaller than in summer, and had no white line; the throat was white, and the line from the eye to the bill very indistinct.

When on the water Razorbills show more of their bodies than the Guillemot, and they erect their sharp-pointed tails. When carrying a single fish, both this species and the Guillemot hold it horizontally, head inwards, the tail hanging out over one side, and one can see the fish distinctly glistening in the sun between the partially closed mandibles.

At one time "Auks" were a marketable commodity in the Orkneys, especially in Papa Westray, where, by means of nets large enough to cover the mouth of the geö, Mr. Traill of



Holland caught upwards of seventy score in one geö in a day. In this same geö were caught by one boat in two days such a number of auks that their feathers were bought by a Mr. Logie, a merchant in the island of Westray, for £9, 18s. sterling.

### *Alca impennis*, L. Great Auk.

So much has been written on the Garefowl by Professor Newton and others, not to mention Symington Grieve's exhaustive monograph of that bird, that at one time we contemplated passing it over with very short notice, thinking the subject had already been sufficiently worked out. However, we have lately collected a good deal of information, some of which is new, and some, again, but little known or quoted, and this we now present to our fellow-naturalists, trusting they will find something of interest therein.

From all we can gather, it may safely be asserted that the Great Auk was always a rare bird in Orkney, and that it only inhabited one island—indeed, as far as is known, only one spot on that island. The place is close to the "Fowl's Craig," on the N.E. side of Papa Westray, and is exactly indicated in the plate by the arrow-head pointing underneath; but of this we shall have more to say further on.

The only mention of this bird by Low is at page 107, where he says, "Have often inquired about the *Great Auk* especially, but cannot find it is ever seen here." Low died in 1795, and therefore we may safely conclude that the Great Auk was very rare then and some time before, for such a large and remarkable-looking bird could scarcely be common without his hearing and getting some information about it when he inquired *especially* about it.

Bullock was the first person who made known the existence of the Great Auk in Orkney to the outside world. He communicated his information to Colonel Montague, who published it in an appendix to the Supplement of his *Ornithological Dictionary*; this we need not repeat again, as it is already so well known. We extract the following, however, from

page 75 of the sixteenth edition of Bullock's *Companion*<sup>1</sup> to his Loudon museum, as it has not been so often quoted :—

"The Great Auk or northern penguin (*Alca impennis*). Of this rare and noble bird we have no account of any having been killed on the shores of Britain, except this specimen, for upwards of an hundred years; it was taken at Papa Westray, in Orkney, to the rocks of which it had resorted for several years, in the summer of 1813, and was finely preserved and sent to me by Miss Traill of that island, a lady to whom I am under considerable obligations for procuring me many valuable and rare subjects from the northern isles, and much interesting information respecting their habits."

"I had the pleasure of examining this curious bird on its native element; it is wholly incapable of flight, but so expert a diver that every effort to shoot it was ineffectual."

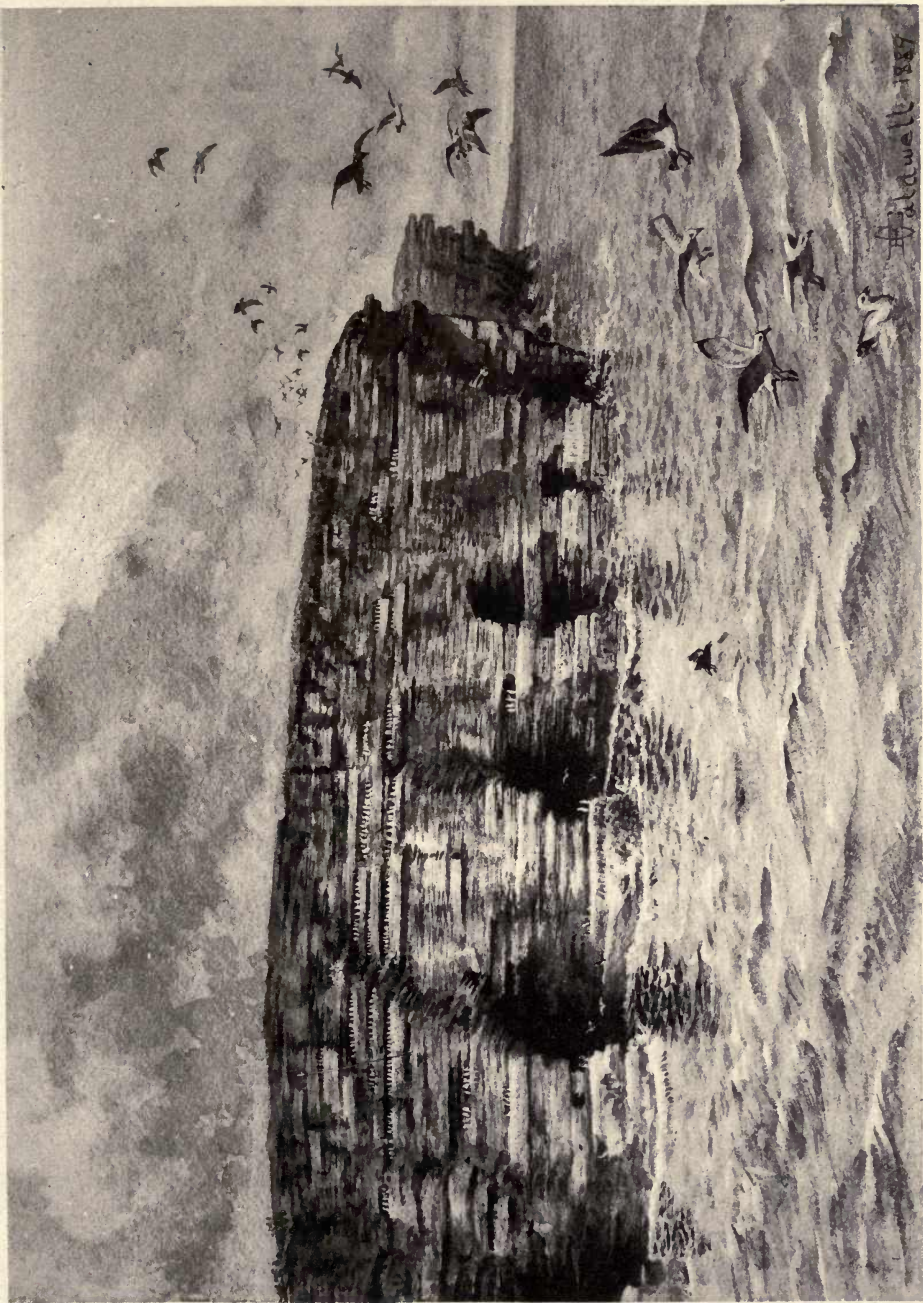
The following is extracted from a priced sale-catalogue of Bullock's museum :—

"Lot 43. Great Auk. *Alca impennis*.—A very fine specimen of this exceedingly rare bird, killed at Papa Westray, in the Orkneys, the only one taken on the British coast for many years, and an egg, in glass case. *Dr. Leach*, £16, 5s. 6d."

We are indebted to Professor Newton for these extracts, which he himself was the first to point out to us from copies of both the works quoted in his possession.

We are also very greatly indebted to Mr. William Evans, Edinburgh, for the following most interesting notice taken from the *Scots Magazine* for March 1814 (p. 167). It was written by Patrick Neill, who visited the Orkneys in 1804, and published an account of his travels there in 1806, and who was an excellent naturalist for his day. He seems to have visited Papa Westray and its Holm, but was too late (August 8th) to see a Garefowl, which by that time would have hatched its young and left the land. This account we do not remember to have seen noticed or quoted before, and its great value consists in its being almost co-temporary with that of Bullock, besides being

<sup>1</sup> *Companion to the Loudon Museum, etc., now open for the public inspection in the Egyptian Temple, Piccadilly, London.*



EAST SIDE OF PAPA WESTRAY, LOOKING N.W.

(The arrow heads indicate the recess in which the last Great Auk lived, and from whence it was shot.)







the only occasion on which an egg is mentioned, showing that the bird actually bred there:—

“In the summer of 1812 Mr. Bullock, of the Loudon Museum, being in Orkney, was informed at Papa Westray that the King and Queen of the Hawks (Auks) had of late years frequented the bays of the island in the summer season. He soon after learnt that the female had been killed with a stone while sitting on her egg, and that the male was still in the neighbouring bay. He had the satisfaction of getting sight of him, and he chased him for several hours unsuccessfully with a six-oared boat. He dived most dexterously, and made great progress under water, so as effectually to elude his pursuers. These facts are stated by Mr. Montague in the appendix to his Supplement to the *Ornithological Dictionary* lately published. We have now to add that last summer (1813) the King of the Auks again returned to his former haunts; but he was solitary, having been unsuccessful in procuring another mate. The zeal of the islanders being roused, he was at length killed, and, through the attention of the family at Papa Westray, the specimen was transmitted to Mr. Bullock. This is the only British specimen known to exist.  
N.”

“EDINBURGH, 28th March 1814.”

[The article was written by Mr. (afterwards Dr.) Patrick Neill, and initialled N.]

During the year 1858, when Messrs. Wolley and Newton were investigating the question of the Great Auk in Iceland, they met a Mr. Hughes on board the steamer, and, finding out in the course of conversation that he was an intimate friend of Mr. Traill of Holland House, Papa Westray, they asked him if he would kindly interest himself to get all possible information from that gentleman regarding the occurrence of the Great Auk in Orkney. Mr. Wolley at the same time made out a series of questions, which would embrace every part of the subject; as these, however, were never answered in detail we need not now give them in full. Mr. Hughes at once complied with their request, and wrote two letters to Mr. Traill, the answer to which we, thanks to the kindness of Professor Newton, are enabled to give as follows:—

“HOLLAND HOUSE, 1st Nov. 1858.

“F. N. Hughes, Esq.

“MY DEAR SIR,—I was duly favoured with yours of 10th August and 20th September, and should have answered them long ere this, but I was very busy with the harvest, and had not time to make inquiries about the Great Auk.

“I have now to inform you that there are several people alive who remember them quite well. The one was shot by a man belonging to this island in 1812, in the Auk Craig, as it is called here, and an aunt of mine had it skinned, and gave it to Mr. Bullock, and I believe it is now in the British Museum. Some boys or lads afterwards killed the other in the craig with stones; but it was not got at the time, but I believe drove on shore some time afterwards, but so much decomposed that it was quite useless. Your friends must be in a mistake about their not flying, as they could not get to the cliff in the craig without doing so.<sup>1</sup> I believe these were the last of them, and that they are now extinct, as that pair was the only ones seen for many years before. . . . This is all I can give you upon the subject, but if your friends choose to visit Orkney I shall be very happy to see them here, when they may be able to pick up some more information. Hoping you will excuse me for not answering you sooner,—I remain, my dear Sir, yours very truly,

“THOMAS TRAILL.”

It may be observed that there is a discrepancy between the date of the killing of the birds given by Mr. Traill in his letter and that of Bullock himself in his Catalogue, and in the Appendix to the Supplement of Montague's *Ornithological Dictionary*. No doubt Mr. Traill is correct in his details, but after the lapse of nearly half a century, we should prefer to consider the dates, as given by Mr. Bullock at the time, more correct than those given, after such a long interval, by Mr. Traill.

In 1812, there was only one bird known, as told us by

<sup>1</sup> As will subsequently be seen, the place in the craig was not easily accessible at low water, but from other accounts as well as this, it would appear that the Great Auk can manage to scramble up places that would appear quite inaccessible to a non-flying bird.

Bullock, the other having been killed before, and quite likely in the manner mentioned by Mr. Traill. The bird chased by Bullock, and afterwards killed and sent him, was almost certainly killed in the summer of 1813, and after Bullock had printed his Catalogue for that year, as there is no mention of it until his Catalogue of 1814.

Bullock made two voyages to Orkney and Shetland in the spring and autumn of 1812, as he expressly mentions at page 46 of his *Companion to the Loudon Museum*, printed in 1816.

Trading, perhaps rather too much, on a preconceived notion, that the Great Auk could only land on a very sloping rock, which must at all events be accessible to the bird at all stages of the tide, Buckley, in 1888, walked round Papa Westray, to find out where such suitable localities existed. He saw several such sites, and, in 1889, Harvie-Brown went there to photograph the most likely one in company with Mr. Norrie. It was while engaged in this work that they derived some most interesting information from one of the natives—James Hourstoun—and we here insert the whole account, *verbatim*, from Harvie-Brown's Journal:—

“*June 30th*, arrived in Pierowall roads.

“*July 1st*.—Having engaged an Orkney boat and two men, Mr. Norrie and I sailed across to Papa Westray in pursuance of instructions in Buckley's letter couched in the following terms:—

“‘Look on the west side of Papa Westray and tell me what you think about its likelihood for being the *nesting* place (query, *resting*-place?—H.-B.), of the Great Auk. One place in particular struck me as being very likely indeed for it; and if Norrie is still with you, have it photographed, as it would make a plate. The place I mean is a long shelving rock some fifty yards or more, as far as I remember, and it would be accessible to the birds at all states of the tide, besides being pretty well out of the surf as regards all ordinary summer gales.’<sup>1</sup>

“With the above to guide us, we landed nearly opposite Pierowall, and walked about three miles by the road direct to the Mull, or north-east end of Papa.

<sup>1</sup> The points particularly to be noted as direct finger-posts in these directions are italicised.

"The very first place we came to at the point was evidently the *shelving* rock intended by Buckley; and certainly the only place the least likely, if indeed possible, as a *resting*-place of the birds. But it would have been better described as west of the extreme Mull of Papa,<sup>1</sup> *i.e.* by compass and chart. It appears certainly as accessible at all states of the tide; but I can scarcely agree with the statement as regards its being *out of the way of the surf of all ordinary summer gales*. To-day the surf, without much wind at all, came in from the north-west, and rushed impetuously up the slopes, breaking half-way up the shelving rock, at least; and it was perfectly self-evident that in a gale from the same direction, it would dash violently upon the very faces of the superintending cliff above. I could not bring myself to consider it as at all a likely spot for a *nesting* site, though likely enough for a *resting*-place."

"We took two photos of it, however, one from near the sea level, from a low rocky point to the west, and another, looking down the slope from the east. I designate these as—'Possible landing-place and resting-place of the Great Auk in Papa Westray (1) from the west, (2) from the east.'

"Further to the east, close to the furthest headland of the Mull—marked by a cairn—another photo was taken, but of a much less likely place. It was even less satisfying in all conditions either as a resting or a nesting place."

"After inspecting the rest of the west cliffs, we retraced our steps, wishing to lose no time over ground already worked, and besides, being desirous of getting under weigh as soon as possible for Seal Skerry, N. Ronaldsay."

"But now, on our way going to the Mull, along the central road and ridge of the island, we interviewed an old man of civil speech. He vaguely remembered the tale of 'The King of the Auks,' and pointed in a north-easterly direction, and towards the range of cliffs called 'The Fowl's Craig,' where, he said, the bird was shot. But, as Buckley's directions said nothing of this, and pointed to the west side only as a possible *nesting* (or

<sup>1</sup> "The Mull" is a name, however, applied to the whole rounded promontory of the north end of the island, and must be so considered when reading the various accounts of the capture of the bird.



*resting*) place, and this old man's memory seemed vague and uncertain, we passed on thinking little more of it."

"But again, coming back, at a point a little further north, or nearer the Mull Head, we said 'good day' to a big, burly, bluff, curly-haired farmer, well clad in moleskin trews, and more like a well-to-do south countryman—about fifty-four or fifty-five years of age, possibly a little more. His speech, however, and his general features, proved his Scandinavian origin, as also did his name—James Hourston—he was particular about the *r* in his name). He afterwards told us that his brother and himself were the only men in Papa who 'fished none.' He owned or rented a farm of seventeen and a half acres. After a time I led up to the subject, saying we had been to photograph the cliffs; and casually mentioned 'the big bird shot many years ago.' At once his face brightened up, and he said promptly, and with an interested and broad grin, 'Oh, ay; the King o' the Aaks; yes, indeed, and I kent the man mysel' who shot it,' and then, pointing to a small house close to the shore, he added: 'and he died down in that wee housie close on the bay.' He then pointed towards the Fowl's Craig in a N.E. direction, and proceeded to describe minutely the 'last resting-place of the Great Auk in life,' and the very spot which had for some time harboured it, before it was shot by William Fowlis. He very accurately described the place, so well indeed that I may say that I identified it distinctly and unaided later in the day. After a little further talk he volunteered to take us round in a boat—'and if ye'll tak' an oar, I'll dae't tae.' Delighted, I said, 'Come along,' and off we started."

"We reached the shore, ran the boat down the inclined natural rocky slip, launched her, put in the camera, and rowed round the intervening low point, and along the Fowl's Craigs which are, apart from the special interest, very particularly well worth a visit and survey from the seaward side. . . ."

"James Hourston now desired that I should myself identify the place he had described, as we slowly rowed along within three boat-lengths of the cliff-foot—the last resting-place of 'the King o' the Aaks.' Close to the north end of the range

I succeeded in doing this, much to the delight of the frank, honest-eyed Orcadian, as well as my own. (There was only one other spot which might partly have answered the description.)"

"The locality is a hole or recess in the exposed face of one of the buttresses, facing therefore the S.E. or possibly the S.E.



*The actual crannie between the caves on  
Papa Westray in which the last Great Auk lived.*

by S. In size it was not more than 3 feet high by about  $2\frac{1}{2}$  feet wide. But there is a double recess, or a recess within a recess, and the one of which I have now given the approximate dimensions is the inner and furthest back. The outer and

shallower recess may make the total dimensions possibly a foot more all round. The depth of the inner recess may be, and appears to be, about  $1\frac{1}{2}$  to 2 feet. Just below the opening of the inner recess the outer is formed by a step of the sandstone about 1 foot to  $1\frac{1}{2}$  feet high, nearly bare of tangle and sea-ware. James Hourston assured us that the bird, except at high tides or at high water (?), jumped up this ledge in order to reach the inner recess; and that William Fowlis had landed and examined it, and had often expressed his belief that it did so, or could not do otherwise."

"This unique and extremely likely-looking place is just above the reach of ordinary tides, but a spring tide would, *and does*, *nearly* submerge it. As we saw it, it was about 6 feet above the sea-level, but either a man or the bird could land, and easily gain access to it or to the shelf below it. As we saw it to-day it was quite out of reach of the comparatively calm sea, but with an easterly wind or gale, or any wind south of east, the waves would plunge into it with full body and force. I believe a north wind, or even a north-east wind would *not* raise any great sea here, as the projecting buttresses would in very great measure protect it. It is my opinion that it would form, in by far the larger number of conditions of wind and weather—certainly in summer—a very secure *resting*—and even possibly a *nesting*-place for such birds as 'the King and Queen of the Auks.'"

"Mr. James Hourston then excitedly and eloquently pointed out how one man, whose name I could not catch, had always gone in pursuit of the rare bird whilst it was known to haunt the cliff, but had always approached from a southerly direction, and, for the reasons already explained,<sup>1</sup> and the configuration of the cliff, had always failed to get near enough. But—triumphantly—how Willy Fowlis had at last 'shotten it' when returning from the fishing to the north, rowing gently down past the near projecting buttress; 'and whan the King louped doon aff the shelve into the sea, there's whare he shotten him,' pointing exultantly to the water, about four boat-lengths off

<sup>1</sup> *Vide* p. 20, Description of Papa Westray.



the cliff and the entrance of the nearest cave. Over this cave, and forming a vast lintel across its upper arch, is an enormous slab of sandstone; and Razorbills and Guillemots frequent its further back recesses."

"The sea was so calm that I said, 'Well, Mr. Norrie, can you manage it?' 'We'll try, anyway;' and it was done, Mr. Norrie taking three careful and rapid full-plates, and we felt not a little happy and elated therewith, as if indeed we had really earned some little recognition of our services. So therefore we—at least James Hourston and myself—drank success to all existing Kings and Queens, and to the *requiescat in pace* of cunning William Fowlis.

"J. A. HARVIE-BROWN."

James Hourston subsequently called on Mr. Cursiter, Kirkwall, who wrote us under date 15/8/89, as follows:—

"Hourston called upon me yesterday with Mr. Harvie-Brown's letter in hand, and wished me to communicate the following. The party who pursued the King of the Auks was John Bull (you will easily recognise Mr. Bullock in this). Foulis' wife was Mary Drever, and they have a daughter, Tomina, still alive. It is thirty-nine years since Foulis died, at the age of seventy-four."

"William Foulis died in the north house of Mayback, Papa Westray, and was buried in the churchyard of St. Bonafine, Papa Westray."

"It was in the summer season of 1813 that the bird was shot. This is *his* information; he further states that the book, with illustrations, was presented to a young fellow some time ago, who went to America."

The book above referred to was mentioned by Mr. Hourston to Harvie-Brown as containing a picture of the boat, and William Foulis standing up in it, when he shot the Great Auk. It was a small book about 12mo size, but Hourston could not say if it were a MS. or printed. He, however, distinctly remembered the picture, and said it was very like Foulis, and that he wore a tall hat.

Mr. Monteith-Ogilvie was good enough to make further



inquiries while he was shooting in Orkney this year, 1889, and we extract the following from his letter :—

“It so happened that there has been a rent collection here (Papa Westray) during the last week, and, the factor being over for that purpose, he has kindly interviewed all the older inhabitants on this subject, and sent the result on to me. The islanders are unanimous that J. Hourston is the only man likely to give any reliable information ; what the rest of them know they know from him.”

“Hourston himself is a bright, intelligent man, with an excellent memory, as I know from other facts, and greatly prides himself on his knowledge of Papa—historical, territorial, and legendary. He is about sixty-five years old.”

1. There were never more than two big Auks heard of in Papa Westray.

(Hourston called them ‘Acks,’ and added that they were not like Acks (Guillemots), but more like ‘what we ca’ Coulties’ (Razorbills), at least they had the ‘same kind o’ neb.’)

2. They never bred on Papa, the Holm, or Westray itself, or in any part of Orkney, as far as Hourston knows.
3. Both birds had been pursued several times by William Buller (phonetic ! Bullock) before the King was shot, in a six-oared boat, without avail, as the birds could swim quicker than the boat could pull.
4. The bird was shot by William Foulis on a rock by the Fowl’s Craig.
5. Time, May ; day of month unknown ; year 1813.
6. After the King was shot the Queen ‘fled straight away for Norway (!)’ and was never seen again.
7. The King and Queen had frequented Papa for some seasons before the male was killed.
8. Hourston didn’t seem to know whether the birds were away half the year or not ; he didn’t think they stayed all the year round.
9. Foulis has a daughter still living on the island, Ina Foulis,

- between seventy and eighty years of age. She has nothing more than a vague recollection of the legend.
10. Foulis was seventy-six years old when he died, and killed the Auk thirty-eight years before his decease.

“Hourston interested me further by telling me there was a book, with a picture in it of William Foulis sitting in the boat as he killed the Auk. He very quaintly added that he didn’t know how any one could have drawn the picture, seeing there was no one there. This book he ultimately found on the island and brought to me, but unfortunately the picture was torn out, and there was no information about the Auk in the text. It is *A Guide to the Orkney Isles*, by the Reverend Charles Clouston, 1862, A. and C. Black, Edinburgh, out of print, and, I believe, very scarce.”

“From his (Hourston’s) description the picture must be lovely, and from a humorous point of view well worth reproducing.”

“I have since seen a whole copy of this book in Mr. Cursiter’s possession (Kirkwall). There is no such picture in it. Mr. Cursiter thinks that Hourston must have seen a sketch Mr. Traill used to have, and which possibly he kept in the front page of the book.”

In all these accounts of the Great Auk, and the capture of the one pursued by Bullock, there are several discrepancies, which cannot now be quite remedied after such a lapse of time, but it is always safer to take the older records in preference to the later ones, when the memory of the circumstances was fresh.

Thus the female was killed *before* Bullock’s arrival, or at least before he saw the birds. No exact time is mentioned, but from internal evidence it would seem to have been at least the summer before.

Bullock does not say that the male that he received was *shot*; Latham says, “knocked down by an oar.” That it was shot, however, we think Hourston’s account fully bears out.

In Dunn’s *Guide* it is said: “Mr. Traill supposed they had a nest on the island, but *on account of its exposed situation* the surf must have washed the eggs (*sic*) from the rocks, and thus

prevented any further increase." Now the place pointed out by Hourston is perhaps one of the least exposed spots on the whole of the island; this makes it appear as if the place where the "King" was shot was merely a resting-place for these birds; for if, as before related, the female could be (apparently) easily approached and killed with stones, it is scarcely reasonable to think that the male could not at least be as easily killed with a gun; whereas both Bullock and Hourston speak to its wildness.

With regard to a statement made previously, p. 247, that that was the only reference to the egg of *Alca impennis* from Orkney, we find it stated at p. 107 of Symington Grieve's work on the Great Auk that "Mr. Scales got an egg from him (Mons. Dufresne) reported to have come from the Orkney Islands, which, however, Professor Newton thinks extremely unlikely."

By summarising all the foregoing accounts, and by giving precedence to the older, and therefore most likely the more reliable ones, the history of the Great Auk in Orkney seems to be as follows:—

Only one pair was *known* to inhabit the Orkneys. That the female was killed before the male, quite probably while sitting on her egg.

That after her death the male did not pair again. That the male lived in the hole in the Fowl's Craig indicated in the plate.

He was at last shot, at or about this place, by William Foulis in the summer of 1813.

William Foulis was about thirty-five years of age when he killed the Auk.

*Lomvia troile* (L.). Common Guillemot.

Orc. = *Skout* (J. G. M.-H.).

An abundant summer visitant, breeding in most of the suitable places all through the islands. Guillemots are fond of sitting with their backs to the sea. When brooding its young one the old bird crouches forward, drooping its wings and puffing itself out until its body looks quite round, and it seems very careful to keep its young one as far back from the edge of the ledge as

possible. The young one we could never see fed, but the old bird on arriving on the ledge with a fish, would hold it in its bill despite the efforts on the part of its neighbours apparently to rob it of the same. After waiting as long as ten minutes or a quarter of an hour, the bird would turn round, shove or fight its way to the back where its young one was, and there feed and nestle it.

In a note by the late Robert Heddle it is stated that the Ringed variety is nearly as common about Hoy as the other, and this is corroborated by Mr. C. H. Warne; in other places our own observations did not bear this out.

### *Uria grylle* (L.). Black Guillemot.

Orc. = *Tyste*.

Common and resident, breeding in most of the islands. In Hoy we have observed the Black Guillemot nesting as high as fifty or sixty feet from the water, whereas, on Eynhallow, they place their eggs underneath a moderately-sized stone on the beach. On this latter island they seem more abundant than elsewhere, and numbers may be seen in the water close to the cairns in which their mates are sitting.

Regarding the plumage of the Black Guillemot, we ourselves have only noticed the bronze wing-spot on one occasion, viz., either in June or July 1883.

Although all these birds that came under our notice during the late autumn and winter had the speckled plumage, it is, we know, the opinion of several people that once the adult plumage is attained it is never lost. Dr. Rae, in his *Expedition to the Arctic Seas*, footnote, p. 185, mentions this. More recently Harvie-Brown received a letter from the lighthouse-keeper in Noss, Shetland, stating that this was his opinion too.

We also quote Low as showing that, even so far back as his time, attention was being paid to this subject:—

“These birds are found in the winter-time almost wholly grey, and others spotted about the head, neck, and back with that colour; but whether they change colour in winter and put on this as a dress of the season, or if it is the last year’s brood



not yet arrived at their proper colours, I am uncertain ; one thing I am certain of, that I have seen them of both colours late in the winter and early in the spring, so that, in my opinion, the change is not universal, or perhaps it is not in the hardest winters when this happens in general."

**Mergulus alle (L.). Little Auk.**

Orc. = *Rotchie* (J. G. M.-H.).

A common winter visitant, but irregular ; its visits depending much on the state of the weather. After a heavy storm Mr. Ranken informs us he has seen them in the Peerie Sea, but they take their departure thence when the weather moderates.

Mr. Cursiter told us that Mr. T. S. Peace on one occasion, on the 15th of January 1885, found quite a number of Little Auks walking about inside a dyke at the Brough of Lingrow, and that he picked up a dozen of them.

**Fratercula arctica (L.). Puffin.**

Orc. = *Tammie-norrie*. *Tommy-noddy* (Low).

An abundant summer visitant, breeding in many of the islands, but we are not aware of any very large colonies, such as exist in the Outer Hebrides. Up to the time of leaving the rocks in August, there appears to be no change in the formation of the bill, which takes place later on, and which is so admirably shown by Mons. Bureau in his paper.<sup>1</sup> This seems to be the rarest in winter of those *Alcidæ* which breed with us.

Mr. Gilmour of the Pentland Skerries Lighthouse gives April 8th and August 19th as the dates of the arrival and departure of the Puffins in the year 1888.

**Order 8. PYGOPODES.**

**Family COLYMBIDÆ.**

**Colymbus glacialis, L. Great Northern Diver.**

Orc. = *Immer* Goose.

A very common winter visitant. We have observed them as early

<sup>1</sup> *De la Mue du bec et des ornements palpebraux du Macareux Arctique.*

as October 15th, and as late as June 2d, in both instances in full adult plumage.

Mr. Irvine-Fortescue informs us that he saw a pair of divers, which he took to be of this species, on May 25th, 1886, which still wanted the dark band round their throats.

Mr. Watt says that he has never seen this bird at Skaill; he thinks they prefer the quiet bays of the more inland waters to the exposed ones of the west coast.

Mr. Spence was informed that a Great Northern Diver had been captured on a rock, Ness of Brough, Sanday, on November 6th, 1880, in full summer plumage.

In 1889 a pair of these divers stayed in St. Margaret's Hope up to the middle of June certainly, and possibly later.

Mr. Moodie-Heddle sends us the following notes:—

“Nearly as common as ever. In 1867 I saw a flock of over twenty in Scapa Flow in the month of July. They were five or six miles from land, and calling like a pack of hounds. It was calm, and they were swimming all together. There was a pair all summer of 1877 and 1878 at Waulkmill Bay, Orphir, and I felt certain they were breeding, though I could not find their nest. In August 1878 I saw one young one swimming with them in the sea; this bird was too young to have come from any distance.

“The Northern Diver screams before gales of wind in winter, just as the Red-throated Diver cackles in summer before rain; the long screaming whistle or yell of the Northern Diver is a much more effective and ‘eerie’ sound, however. It is usually made just before diving.”

Mr. Monteith-Ogilvie writes us that he saw a dozen of these birds together, near Kirkwall, in November 1889.

### *Colymbus arcticus*, L. Black-throated Diver.

Appears always to have been a rare species in Orkney, and we have no authentic instance of its breeding anywhere in the islands. Mr. Moodie-Heddle says it is getting scarce in Hoy, but he never seems to have found it breeding there, so that this must refer to its passing visits.

Mr. Ranken says he saw a pair of these birds, once only, in Inganess Bay in December 1876.

When Buckley was living at Westness in 1883, he saw a pair that constantly frequented the "Muckle" and "Peerie" lochs in May and early in June, but could not make out that they bred there, though he often looked for some sign of a nest. Later on, in July, pairs of these birds were again observed by him frequenting these same lochs. From this, it would appear as if these lochs were in their line of migration. Constantly in the evenings, at the end of July and beginning of August, we used to hear and see Divers, either Black- or Red- throated, flying over the island of Rousay, almost always in pairs, and taking a S.W. course.

Mr. Millais writes us : "The Black-throated Diver is scarce. I have noticed it four times in spring, and have two eggs taken on a small loch in Hoy, which undoubtedly belong to this species, though I have not heard of its breeding elsewhere. A Black-throat was shot, August 1886, by the Rev. S. A. Walker, near the point of Ness, Mainland."

Referring to its breeding in this note, we think it would have been more satisfactory as establishing the fact had Mr. Millais himself taken the eggs and seen the birds—divers' eggs being rather deceptive in appearance, and still more so in size.

### *Colymbus septentrionalis*, L. Red-throated Diver.

Orc. = *Loom*. *Loon*.

Though resident in greater or less numbers, we have no authentic information that this bird ever bred in any other island than that of Hoy ; but, from the time of Low downwards, it has always been noted as nesting there.

At one time, Mr. Moodie-Heddle informs us, the bird was nearly exterminated as a breeding species from Hoy, owing to people being bribed to steal the eggs. Now, however, owing to that gentleman's care and preservation, there are usually some four nests in the island.

Mr. Irvine-Fortescue tells us that two or three of these birds are usually to be seen in Swanbister Bay.

In 1888, during our visit to Hoy, we often saw and heard this species there, and found a nest containing two eggs on the edge of one of the "brulochans," or, as they term them in Orkney, "Loomagens."

Concerning this Mr. Moodie-Heddle writes us :—

"Red-throated Diver, also 'Loom.' There are lochs or hill tarns all over Orkney, now sometimes drained out, which are called 'Loomagens'; hardly an island, but has one set of lochs so called. These were formerly, when water was at high level, the breeding-places of the 'Looms.' Now they are mostly confined to Hoy and Walls."

There are, we know, one or two such lochs in Rousay termed "Loomagens," but, for all this, as stated above, there seems to be no authentic account of these birds having bred out of the island of Hoy.<sup>1</sup>

That the Red-throated Diver, however, does frequent lochs in other parts of Orkney at times we are aware, and it is possible that, if protection could be given it, the species might yet be found nesting on the Mainland. In 1888 Mr. Irvine-Fortescue saw a pair on Hobbister loch; and in the same year Mr. Cameron of Burgar saw two pairs, late in May or early in June, on two small lochs not far from that place. We went out there ourselves on June 11th to look for them, but could then only see one bird on the nearer loch.

#### Family **PODICIPITIDÆ.**

##### **Podiceps cristatus (L.). Great-Crested Grebe.**

Mr. Moodie-Heddle informs us that his father saw a dead specimen in 1829 near Melsetter—"a large bird." Mr. Millais writes us :—"I have seen this species occasionally in winter in the Sound between Hoy and Græmsay. Specimens have been killed in autumn in Loch Harray and in Sanday, by Mr. Begg of Stromness."

<sup>1</sup> Mr. Begg, in a letter dated April 24th, 1890, distinctly affirms that the Red-throated Diver used to breed on the edge of a small loch on the hill above the Established Manse, Stromness.



*Podiceps griseigena* (Bodd.). Red-necked Grebe.

Messrs. Baikie and Heddle say that this species is not uncommon in winter.

Mr. Irvine-Fortescue mentions that he has seen another grebe, of what species he could not be certain, frequently during winter in the Loch of Harray. He notes both the Little and the Slavonian Grebes.

*Podiceps auritus* (L.). Slavonian Grebe.

Dunn considered this a rare bird in Orkney. Messrs. Baikie and Heddle say it was formerly common about the Loch of Aikerness; before it was drained, no doubt.

Mr. J. G. Millais tells us that at a certain time in the spring the Slavonian Grebe may be considered almost a common bird; he has shot many, several of them in most perfect plumage, but he adds that they are very shy.

Mr. Irvine-Fortescue constantly observes this species in autumn and winter in Swanbister Bay, and Mr. Monteith-Ogilvie saw and shot some in Kirkwall Bay in December 1889.

Writing to us at a later date, Mr. Millais says:—

“I had heard that many years ago the Slavonian Grebe used to stay commonly till May in the bays and lochs of Orkney, but now it is not more than one year in ten that they do so. Two or three were seen in April 1886 in the Bay of Ireland, off the Skerries of Clestron, and, as I also heard that the Long-tailed Ducks were likely to stay that year also, I set off to try and obtain the former species in its full summer plumage. The adverse winds from the north had evidently stopped their northward migration, and I succeeded in getting some specimens in full breeding dress before they left. They were extremely shy, and I seldom got nearer than eighty yards, so had to shoot them with my 8-bore. I have also shot a Slavonian Grebe in winter in Hoy Sound. The year when they stayed so late (1886) a pair were noticed till the end of June on Loch Stenness, and then disappeared. I noticed a peculiar habit of this bird, which shows how easily frightened it is. Whilst a boat is

approaching it, should any bird, as a Shag or Black Guillemot, happen to rise anywhere in its vicinity, the grebe always rises at once; we had therefore to be extremely careful to get such birds as there were within sight well out of the course of the boat."

Regarding this bird breeding in Orkney, Mr. Spence writes as follows:—"I only know of one instance in which the nest and eggs of this bird have been found in Orkney. In this instance referred to it was found breeding in one of the marshy pools on the Quanterness moors. One of the eggs then obtained is now in Mr. George Walker's collection." This would require much further confirmation before such a fact could be taken for granted.

*Podiceps nigricollis* (*C. L. Brehm*). Eared Grebe.

Mr. Small, Edinburgh, informs us he had an Eared Grebe sent him from Orkney on June 1st, 1873.

Mr. Millais informs us that he believes, in Dunn's time, he used to get this grebe in Loch Stenness, but that of late years he has never heard of a specimen having been killed anywhere in Orkney.

*Podiceps fluviatilis* (*Tunstall*). Little Grebe.

Not uncommon, and resident. Low found it breeding in South Ronaldsay. Mr. Watt says it nests in the reeds on the Loch of Skaill, and remains the whole year round; we saw its eggs in Mr. Irvine-Fortescue's collection from this place. Mr. Millais says they are resident on the Loch of Stenness. In Sanday they breed on Loch Bea, and we have seen eggs taken there in the collection of Mr. Denison of Brough. We have noticed the Little Grebe on Loch Wasbister during the summer of 1883, but did not look for its nest, though the loch is well suited for it; we also saw this species in a small loch in the island of Egilsay in June 1888.

### Class 3. REPTILIA.

*Chelone imbricata* (*Schweigg.*). Hawks-bill Turtle.

The only reptile of which we have any record is mentioned in the following note by Fleming, who, in his *History of Animals*, says:—

“Sibbald, afterwards in his *Auctarium Musei Balfouriani*, p. 193, adds ‘*Testudo maxima squamosa*, the Scalie Sea Tortoise, the shell of it.’ The animal came into Orkney, and this was sent to me from thence.”

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### Class 4. AMPHIBIA.

Of the AMPHIBIA there is only one representative—

*Bufo vulgaris*, *Laur.* Common Toad.

This species is common in most of the islands.



Class 5. PISCES.

Sub-class 1. *PALÆICHTHYES*.

Order 1. **CHONDROPTERYGII.**

Sub-order *PLAGIOSTOMATA*.

Division SELACHOIDEI.

Family **CARCHARIDÆ.**

**Carcharias glaucus (L.).** Blue Shark.

Several times taken in Orkney: in Hoy 1847 and 1884.—J. G. M.-H.

**Galeus canis, Bonap.** Common Tope.

Recorded from the Orkneys by W. Baikie.

[*Obs.*—*Carcharias lamia*. White Shark.—A specimen taken at Kirkwall about 1867, and others have been seen, which were no doubt this fish.—J. G. M.-H. This fish is not admitted to the British list by Day, and there may have been some mistake in the identification.]



**Mustelus vulgaris, Müll. and Henle. Smooth Hound.**

Not uncommon in Orkney. They are occasionally caught in the nets set for Dogfish off Orphir.

**Family LAMNIDÆ.****Lamna cornubica (Gm.). Porbeagle.**

Common in Orkney, but not very often captured.—J. G. M.-H.

Mr. Irvine-Fortescue remembers seeing one when a boy, about twenty-five years ago, which had been caught in a net set for Dogfish in Scapa Flow; it was about six feet long.

**Alopias vulpes (Gm.). Thrasher.**

Mr. Moodie-Heddle informs us that one of these Sharks was seen attacking a Whale, in company with Sword-fish, in the Pentland Skerries, by some fishermen from Brimms, in either 1865 or 1866; and in the *Orkney Herald* for September 1868 there is a description of a like encounter seen by a Westray boat's crew off Noup Head.

Mr. W. Reid also describes a fish which came ashore in Papa Westray in 1884, which he refers to this species. Mr. Irvine-Fortescue saw one being exhibited in Glasgow in or about 1884, which was said to have been caught off Westray.

**Selache maxima (Gunner.). Basking Shark.**

Mr. Moodie-Heddle says this is an extremely common species, and quite harmless, sometimes exceeding 27 feet in length.

Under this heading Mr. Moodie-Heddle writes us as follows:—

“There is undoubtedly another fish confounded with the Basking Shark, just as there are two confused under the name of White Shark.

"The following are measurements of one killed at Wick, September 1868, in herring nets: Length, 27 feet; pectorals, 7 feet; only one dorsal fin 3 feet high; tail more equally lobed than in the Basking Shark; teeth small, smooth, slightly curved, and disposed in even rows obliquely across the semi-cylindrical cartilage of the jaws, like a series of spirals. Its liver filled nine barrels.

"A large fish, apparently with only one dorsal fin, was seen for some time, and fired into, in a gale in the Pentland some years before this. It appeared about 25 feet long.

"I have seen a fish of the same proportions, but only about 9 feet long, without dorsal fin except one, caught since on long lines."

#### Family **SCYLLIDÆ.**

##### **Scyllium canicula (L.).** Small-spotted Dogfish.

Occurs, but not very common.—J. G. M.-H.

"Called by Orcadians 'Da,' the *a* being pronounced in as *far*. They sometimes come close into shore, *i.e.* into 8 feet or less of water. I only see one occasionally."—W. Irvine-Fortescue.

##### **Scyllium stellare (L.).** Large-spotted Dogfish.

Somewhat commoner than the last, but the two species seem to be frequently confounded.

#### Family **SPINACIDÆ.**

##### **Acanthias vulgaris, Risso.** Picked Dogfish.

Orc. = *Hoe. Sea Dog.*

Mr. Irvine-Fortescue writes us as follows:—

"Used frequently to fill Scapa Flow and drive all other fish

away in summer. They appeared always to travel west, and usually came in at spring-tides. In Orphir several men used to set nets for them. Each boat set two nets, each net about 50 or 60 yards long (60 fathoms before the net was 'backed' was the usual length), and at a good haul got seven or eight score of Dog-fish in each net. Of late years, *i.e.* during the last five or six years, they have not infested Scapa Flow as formerly, and though shoals have passed through, they have been there one day, but gone the next. They were split and dried and sold for food, and oil was made from their livers."

Low also mentions their abundance at times, and also that their presence drives off other fish from the coast.

### *Læmargus borealis* (*Seoresby*). Greenland Shark.

Occurs in Orkney, but more commonly in Shetland.—J. G. M.-H.

### Family RHINIDÆ.

### *Rhina squatina* (*L.*). Angel Fish.

W. Baikie says this fish is rare in the Orkneys.

### Division BATOIDEI.

### Family RAIDÆ.

### *Raia clavata*, *L.* Thornback Ray.

Common.

### *Raia radiata*, *Donovan*. Starry Ray.

Mr. Moodie-Heddle has seen several of these fish amongst the Thornbacks brought in for sale from ground outside Copinsay.



*Raia batis*, L. Skate.

Very abundant and of large size. On two occasions we have seen a huge Skate following our small sailing boat, between Rousay and the Mainland, which would have filled the bottom of the boat. On one occasion we were rowing, and the fish seemed to be following the blade of the oar, coming close to the surface of the water.

Mr. Irvine-Fortescue's father, about the year 1865, caught a Skate in a flounder net in Swanbister Bay, in about 8 fathoms of water, which weighed 198 lbs.

*Raia alba*, Lacép. Bordered Ray.

Not uncommon, and grows up to 250 to 280 lbs. in weight.—  
J. G. M.-H.

*Note*.—It is more than probable that other species of Rays are met with in Orkney, such as *R. fullonica*, and *R. vomer*, but as we have no actual record of their occurrence, they cannot at present be included.

Mr. Moodie-Heddle sends us a note of one, which he thought from the description given was an Eagle Ray, which pursued a boat under Berry Head in Hoy about 1866. The men were much frightened, and threw out ballast, which the fish descended after, but always again followed the boat, until the men ran it into a geö. Could this have been the rare *C. giornæ*, which is said to attain an enormous size?

*Raia lintea*, Fries. Sharp-nosed Ray.

Recorded by W. Baikie.

Sub-order *HOLOCEPHALA*.Family *CHIMÆRIDÆ*.*Chimæra monstrosa*, L. Northern Chimera.

Recorded from the Orkneys by W. Baikie.



Order 2. **GANOIDEI.**Sub-order *CHONDROSTEI.*Family **ACIPENSERIDÆ.***Acipenser sturio*, L. Sturgeon.

Recorded from Orkney as far back as the time of Wallace, and again by Low.

In later times one was found just dead at Melsetter by Mr. Moodie-Heddle's father in 1828, which was 3 feet long. Another came ashore about 4 feet long in 1867, which Mr. Moodie-Heddle saw, and from which he removed some of the plates.

Sub-class 2. *TELEOSTEI.*Order 1. **ACANTHOPTERYGII.**Division **ACANTHOPTERYGII PERCIFORMES.**Family **SPARIDÆ.**Group *PAGRINA.**Pagrus auratus* (L.). Gilthead.

Not common. First recorded from Orkney in 1844.—J. G. M.-H. There was one in the Kirkwall Museum.—W. Baikie.

*Pagellus centrodonatus*, *De la Roche.* Common Sea Bream.

First described as an Orkney fish from two specimens caught at Scapa in 1853 or 1855. Not uncommon in the Pentland Firth.—J. G. M.-H.

Mr. Irvine-Fortescue says these fish are frequently caught in hand-lines in Scapa Flow. They appear to swim in small shoals,

for if one is caught, one or two more are usually caught at the same time, in a few minutes, and, after that, no more, the shoal probably having passed on. Considered a coarse fish by the Orcadians.

Division ACANTHOPTERYGII SCIÆNIFORMES.

Family SCIÆNIDÆ.

*Sciæna aquila* (Lacép.). Maigre.

Has been taken in Orkney, and Mr. Moodie-Heddle informs us one was taken at Kirkwall in 1856, 30 lbs. in weight.

Division ACANTHOPTERYGII XIPHIIFORMES.

Family XIPHIIDÆ.

*Xiphias gladius*, L. Swordfish.

Couch gives an instance of a Sword Fish being seen off Westray, in 1861, attacking a small whale.

Mr. Moodie-Heddle states that it is an occasional visitant. One was seen in company with a Thrasher attacking a whale in the Pentland Firth.

See also for another occurrence, under Thrasher, p. 267.

Division ACANTHOPTERYGII COTTOSCOMBRIFORMES.

Family CARANGIDÆ.

*Garanx trachurus* (L.). Horse Mackerel.

In 1857 Mr. Reid caught one of these fish with a rod and worm.

Mr. Moodie-Heddle says he believes the Scad to be a common fish in Orkney among herrings.

Family **CORYPHÆNIDÆ.****Lampris luna (Gm.). Opah.**

More than two centuries ago, Wallace described this fish from a specimen taken in Sanday, and gave a plate of it. Since then several more have been taken about these islands, and one of our correspondents considers it not rare.

Baikie in the *Zoologist* for 1853 says one was taken in Sanday, nearly 6 feet long.

Mr. Irvine-Fortescue saw one in a cart near Scapa, which had been taken in the islands, somewhere about 1865.

Family **SCOMBRIDÆ.****Scomber scomber, L. Mackerel.**

Low mentions these fish as occurring in vast shoals in the end of July and beginning of August, one of these immense shoals extending from a good way to the eastward of Copinsay to within Holm Sound. He adds that notwithstanding all this, the people take but little trouble about them.

Of late years the Mackerel seems to have almost abandoned these islands, as they have so many other parts of the north of Scotland, though a few still occur.

Family **TRACHINIDÆ.****Trachinus vipera, Cuv. et Val. Lesser Weever.**

One was dug out of the sand at Scapa Bay by Dr. Duguid, in 1849, and Mr. Irvine-Fortescue has a specimen taken at Swanbister by Mr. Halcro—the only one seen by him.

Family **PEDICULATI.****Lophius piscatorius, L. The Angler.**

Orc. = *Mersgam*. Fishing Frog.

Apparently a common species in Orkney, and on two occasions



Mr. Reid mentions their being captured with a bird in their mouth; in one case the victim was a gull, in the other a cormorant.

Mr. Irvine-Fortescue says this fish not unfrequently comes ashore in a dying condition, and he often sees their remains along the shores of Scapa Flow.

Mr. Moodie-Heddle says the Angler is very common, though never fished for; they are usually seen ashore after a gale. One in Longhope swallowed a tame duck, but was choked in the effort. They are said to be good eating, and Mr. Moodie-Heddle saw numbers being barrellled up for the London market at Aberdeen during the winter. They had been caught by the trawlers in what they call the Pentland Firth, but really on the sandbank extending from Duncansbay Head to the north-east of the Pentland Skerries.

#### Family **COTTIDÆ.**

*Cottus scorpius*, *L.* Short spined Sea Bullhead.

Very common.

*Cottus bubalis*, *Euphr.* Father Lasher.

*Orc.* = *Comper*.

Not so common, according to Baikie, as the former, though Low says it is a very abundant species.

*Trigla cuculus*, *L.* Red Gurnard.

Baikie records two examples taken in the winter of 1850-51.

*Trigla gurnardus*, *L.* Grey Gurnard.

The Grey Gurnard occurs, but it is not very abundant.

Low mentions this species as being caught by a line trailed behind the ships as they approach the islands: he also remarks on the croaking noise made by them when hauled on board, from whence their trivial name, "Crooner."

#### Family **CATAPHRACTI.**

*Agonus cataphractus* (*L.*). Pogge.

Baikie says this fish is not numerous in Orkney.



## Division ACANTHOPTERYGII GOBIIFORMES.

## Family DISCOBOLI.

*Cyclopterus lumpus*, L. Lump sucker.

Mentioned by Low as common, though of no great size, and Mr. Moodie-Heddle also says this is a common species.

Mr. Irvine-Fortescue occasionally sees one, and also the spawn at dead low spring tides on Swanbister Point. The young are common in the summer in Scapa Flow, swimming about floating sea-weed.

*Liparis vulgaris*, Flem. Sea Snail.

Low mentions this fish as common, and nowhere more so than at the ness of Stromness. Baikie also reports it as common.

*Liparis montagui* (Donov.). Montagu's Sucker.

"In the Orkneys and Shetland Isles an example upwards of 3 inches in length was taken by Mr. Syme in the winter of 1850-51 (W. Baikie)."—Day, *Brit. Fish.*, vol. i. p. 187.

## Family GOBIIDÆ.

*Gobius niger*, L. Black Goby.

Mr. Moodie-Heddle says this fish occurs in Orkney. By some observers, Day says, this species is considered to be pretty common, but Baikie remarks that it is rare.

*Gobius minutus*, Gm. Little Goby.

Occurs in Orkney.—J. G. M.-H.

*Callionymus lyra*, L. Skulpin.

First recorded from the Orkneys by Low, who found a specimen entangled among the sea-ware, and was the only one he ever saw. Mr. Moodie-Heddle also sends us notes of its occurrence.

## Division ACANTHOPTERYGII BLENNIIFORMES.

## Family BLENNIIDÆ.

*Anarrhichas lupus*, *L.* Wolf-fish.

Low says this very ugly fish is often caught at sea, and sometimes thrown ashore after storms; he adds that it is excellent eating, though none are very fond of it. Mr. Moodie-Heddle also says it occurs among the islands.

*Blennius ocellaris*, *L.* Butterfly-fish.

A specimen of this rare fish is recorded by the late R. Heddle as having been taken in the Orkneys in 1849, but there are no particulars given.

*Blennius ascanii*, *Wall.* Crested Blenny.

Recorded as very common at times about Kirkwall by W. Baikie, and Mr. C. Traill observed it in Rousay as early as 1856.

*Centronotus gunellus*, *L.* Butter-fish.

Orc. = *Swordick*.

Very common, and recorded by Low as such. Mr. Moodie-Heddle's father has found the variety (Purple Blenny?) mentioned by Low.

It was somewhere about the spring of 1871 that Mr. Moodie-Heddle first noticed the "Swordick" breeding on the shores of the north side of Longhope, Hoy. He observed several small masses of spawn with a pair of these fish lying curved so as to make nearly a circle round each mass: when removed, the fish returned to the same spot repeatedly. The situation chosen was under large stones, among which were numbers of crabs of different sorts, eels, starfishes, Viviparous Blennies, etc. It seems most probable that fish

must guard their spawn with such surroundings, or it would be devoured.

This species is by no means solitary, several of different sizes being found under one stone. It would be much more plentiful than it is, but is persistently hunted, being used as a bait to trail behind a boat for Lyths, etc.

The spawn of the Spotted Blenny seen by Mr. Moodie-Heddle was in a small mass about the size of a chestnut, and pearly white in colour, the separate grains appearing to him about the size of lobster-roe.

### *Zoarces viviparus*, L. Viviparous Blenny.

Orc. = *Greenbanes* (Prof. Heddle).

Low mentions that he found this species common under stones at low-water mark, from 6 to 10 inches in length. He also attributes the name "Eel-pout" to them, and describes how he kept the young alive in a glass for several days, changing the water at every tide.

Baikie also describes them as common. Mr. Moodie-Heddle says: "Occurs in Orkney. One on being put into spirits exuded a single ovum much larger than that of a Swordick."

## Division ACANTHOPTERYGII MUGILIFORMES.

### Family MUGILIDÆ.

#### *Mugil chelo*, Cuv. Lesser Grey Mullet.

Some confusion exists between the Grey Mullet (*Mugil capito*) and the Lesser Grey Mullet. The latter is said to be much the commoner in the north of Scotland, and it is probable that the notes we have received refer to it.

Mr. Moodie-Heddle records both species from Melsetter in summer, and says they are common.

Mr. Irvine-Fortescue writes: "Grey Mullet, *sp.?* I got one in a trout-net in Swanbister Bay. I have seen them in the bay of Firth. Common also, I believe, in the loch of Stenness and the bay below Melsetter."



## Division ACANTHOPTERYGII GASTEROSTEIFORMES.

## Family GASTEROSTEIDÆ.

*Gasterosteus aculeatus*, *L.* Three-spined Stickleback.

Common in both salt and fresh water (Irvine-Fortescue).

*Gasterosteus spinachia*, *L.* Fifteen-spined Stickleback.

Common, according to Messrs. Irvine-Fortescue and Moodie-Heddle.

## Division ACANTHOPTERYGII GOBIESOCIFORMES.

## Family GOBIESOCIDÆ.

*Lepadogaster gouanii*, *Lacép.* Cornish Sucker.

Baikie mentions an example of this fish taken by Mr. J. Syme in Scapa Flow in the winter of 1850.

*Lepadogaster bimaculatus* (*Penn.*). Bimaculated Sucker.

Baikie says this species is not rare. Mr. Moodie-Heddle records it from Rousay in 1845.

## Division ACANTHOPTERYGII TÆNIIFORMES.

## Family TRACHYPTERIDÆ.

*Trachypterus arcticus* (*Brünn*). Deal-fish.

Not very rare in Orkney. Mr. Moodie-Heddle mentions three that came ashore in three successive years, 1844-5-6, and Mr. Reid says that during his residence in Kirkwall he received several specimens; most of these had, however, been partially



destroyed by gulls, more especially by the Lesser Black-backed species.

*Regalecus banksii* (*C. and V.*). Bank's-oar Fish.

Mr. Reid informs us that a fish of this species came ashore on the rocks below Musgarth, in the island of Eday, in April 1871. It measured 9 feet in length, but only 3 inches in its greatest thickness.

Order 2.

**ACANTHOPTERYGII PHARYNGOGNATHI.**

Family **LABRIDÆ.**

*Labrus maculatus*, *Bl.* Ballan Wrasse.

Low says the Wrasse is "found close in shores where they are highest, and deep water;" he adds they are much sought after as food, though they are coarse, and are roasted fresh. Baikie says that the species is not common.

The Ballan Wrasse is mentioned by Neill in his *Tour*.

Mr. Irvine-Fortescue saw some Wrasse which were brought to Swanbister Bay, but he did not know the species.

*Labrus mixtus*, *L.* Striped or Cook Wrasse.

Recorded once from Kirkwall by Iverach. Mr. Moodie-Heddle also has observed it in Orkney.

*Crenilabrus melops* (*L.*). Goldsinny.

Rare in Orkney (Baikie).

*Crenilabrus exoletus* (*L.*). Small-Mouthed Wrasse.

In the *Zoologist* for 1853, Baikie records the capture of two small examples of this fish in Kirkwall Bay in December 1850.

Order 3. **ANACANTHINI.**

## Division 1. ANACANTHINI GADOIDEI.

Family **GADIDÆ.****Gadus morrhua, L. Cod.**

One of the most important fish to the Orcadians. Cod-fishing is here prosecuted until the end of May, the principal fishing-grounds lying away to the west of the islands. At that time we have seen great quantities of these, as well as other fish, lying on the quay at Kirkwall; but the sight, though interesting, was not altogether a pleasant one, as, owing we suppose to the depth from which the fish were taken, the intestines were in most instances protruding from the mouth.

In Low's time the cod-fishing seems to have been altogether given up in the Orkneys, though, from his account, not from lack of fish. Before this, however, such was not the case. There were many stations that employed a number of boats and men constantly, catching and curing these fish for the southern markets. "Now," says Low, "all is sunk in indolence and sloth, with but faint hopes of ever emerging from it."

Low assigns no cause for this stagnation of the fish trade, but the frequent wars of those times may have had something to do with it, as the following extract from Shireff's *General View of the Agriculture of the Orkney Islands*, published in 1814, may show:—

"During our war with France at the commencement of this century, the fishing smacks, being much harassed by privateers on the Dogger Bank, came to Orkney to prosecute the cod-fishing there, and endeavoured to carry their fish alive in wells to the London markets."

Even large Cod come at times into very shallow water close to the land, and we saw one caught by a lady near Stromness that weighed over 30 lbs. Near here, too, we have seen Cod of from 15 to 16 lbs. weight, while we were "cuddy" fishing, following our hooked cuddies so close to the boat that, had we only had an ordinary salmon gaff, we could easily have

gaffed them out. At times the Cod would seize the cuddies on our line and shake them as a dog does a rat, and more than one cuddy bore the marks of their teeth when taken in.

*Gadus æglefinus*, *L.* Haddock.

Abundant, and they here run to a larger size than those of the Moray Firth, though the flavour does not appear to be so fine. They not unfrequently weigh as much as 6 or 7 lbs., and we have caught them just outside Rousay of quite that weight.

*Gadus merlangus*, *L.* Whiting.

Low considered the Whiting a rare fish in his time, and thought that, being a delicate fish, it could not bear the strong winter seas: he adds the curious remark that when Haddocks are abundant so are the Whittings.

Mr. Moodie-Heddle remarks that Whittings occur at Scapa, but are rarer than the Haddocks.

*Gadus minutus*, *L.* Power.

Two specimens were obtained at Kirkwall in August 1851 (W. Baikie).

*Gadus pollachius*, *L.* Pollack.

Orc. = *Lythe*.

Common, especially along the rocky shores of the Pentland Firth, but our own experience is that it is not so abundant as in the steep-sided and rocky bays of other parts of Scotland. *Lythe* only come near the shore during the warm weather, from June or July, leaving again about September.

*Gadus virens*, *L.* Coal Fish.

*Sillock*: *Piltak*: *Cuddy*: *Saithe*: *Grey-fish*.

Abundant everywhere in one or other of these stages. Mr. Moodie-Heddle says they take the above names according to age, and he gives a year to each name.

Mr. Irvine-Fortescue sends us the following notes on this fish: "The young appear along the shores about June. As

soon as they are large enough to take a fly, they are caught in large numbers in the autumn evenings, sometimes as many as 400 in an afternoon.

“As winter advances the sillocks become more and more torpid, till—especially if the weather be frosty—they gather in dense masses, remain about the same spot, and will not take a fly. At this time they rapidly fall off in condition, and immense quantities are taken with sweep-nets for manure. They do not, however, gather into the bays in this manner every season, a heavy gale on shore in autumn sending the shoal out to sea, and if once broken up (at Swanbister at least) they do not return in any quantity during the winter. By May, Sillocks appear to change their name to ‘Cütties’ (the *u* is modified as in German), and are taken with fly through the summer. Afterwards they become Saithe. Oil used to be made from their livers.”

Coal-fish are caught in great quantities with long lines, and brought into Kirkwall along with the Cod, Ling, etc.

### Merluccius vulgaris, *Flem.* Hake.

Mr. Moodie-Heddle says the Hake is common, coming with the shoals of Herring.

### Molva vulgaris, *Flem.* Ling.

One of the commonest of the genus in Orkney, and seems always to command a good price. It is generally salted, and not used in a fresh state; and where it is suitable for drying purposes, the beach in such localities is white, covered as it is to such a large extent with the bodies of Ling, Cod, Tusk, etc., drying in the sun and wind. The beach for such a purpose requires to be covered with smooth more or less rounded stones, of fairly large and equal size, to allow the wind to circulate underneath the fish. Such places are the Peerie Sea, at Kirkwall; Pierowall Bay in Westray; the islands opposite Stromness; and the north-west end of Veira. Some of these drying-places have been used as such for a great length of time.



**Motella mustella (L.).** Five-bearded Rockling.

Low says this species, which he calls the "Whistle-fish," is commonly found under stones, seldom exceeding 9 or 10 inches in length, and is reckoned pretty good eating.

**Motella tricirrata (Bl.).** Three-bearded Rockling.

Baikie records a single example of this fish from Stromness.

**Raniceps trifurcus (Walb.).** Tadpole Hake.

The only notice we have of this species is recorded by Day in his *British Fishes* (vol. i. p. 321). "June 20th, 1876, one, 8 inches long, was found at Kirkwall, Orkney, in a dying condition off the pier-head (J. Bruce.—*Zool.*, p. 5049)."

**Brosmius brosme (Müll.).** Torsk; Tusk.

Common. Generally used salted, and, like the Ling, is considered a valuable fish.

Family **OPHIDIIDÆ.****Ammodytes lanceolatus, Lesauv.** Greater Sand Launce.

Recorded as rare in Orkney by W. Baikie.

**Ammodytes tobianus, L.** Lesser Sand Launce.

According to Low, very common at particular times of year in the heaps of sand thrown up by the tide, and in some places was taken, as is now the case, with a reaping-hook, blunted.

Mr. Irvine-Fortescue writes us as follows :—

"I have specimens of what I take to be this fish, length 2·3 inches—no doubt not fully grown. The remarkable thing was that, on June 13th, 1884, for the first time during over fifteen years, I observed them congregated in dense masses, so as to form

blackish spots, appearing from the distance of half-a-mile, as though there were spots of sea-weed in the sandy bottom. The masses of eels were several feet in diameter, and there were several of these spots below the store at Swanbister. They remained in this way for several days. I have only once seen anything of the sort since, and then not to the same extent. Both what I take to be this and the Larger Launce are common in Swanbister Bay, swimming rapidly in long straggly shoals. One occasionally comes across a Launce in the sand when digging bait."

## Division 2. ANACANTHINI PLEURONECTOIDEI.

### Family PLEURONECTIDÆ.

#### Hippoglossus vulgaris, *Flem.* Holibut.

Orc. = *Turbot*.

Common, and commands a much higher price now than formerly.

Mr. Moodie-Heddle says they are very abundant, and often of great size. One of 6 feet in length, and another of 7 feet, weighing 4 cwt., were brought into Kirkwall, where we have seen many, though none so large as these.

#### Rhombus maximus, *L.* Turbot.

Though counted rare in Low's time, improved means of fishing bring a good many more into the markets. Still, judging from what we have seen brought into Kirkwall, they do not seem to be an abundant species by any means.

Mr. Moodie-Heddle gives Deer Sound and the Stronsay Firth as localities for Turbot.

#### Rhombus lævis (*L.*). Brill.

Orc. = *Quirnfish*.

Rare in the Orkneys, according to Baikie.

#### Rhombus punctatus, *M.* Müller's Topknot.

Mr. Irvine-Fortescue writes that this fish is very common on the point at Swanbister, where he has seen several every time a very

low spring-tide allowed him to look for lobsters. The largest he ever saw measured  $8\frac{1}{2}$  inches in length. Doubtless it is very common all round Scapa Flow, and in other suitable localities, such as Kirkwall Bay.

*Arnoglossus megastoma* (Donovan). Sail Fluke.

"I had always believed this species was peculiar to Orkney. There in sandy bays it *sails* ashore, cocking up its tail as a sail, and is not got by fishing for. When Couch was publishing his *British Fishes* in shilling numbers, I one day picked up a Sail Fluke, and handed it over to the late Dr. Duguid and Mr. John Iverach, chemist, the latter of whom was taking in Couch at the time. It was admitted as a species by Couch, and if you have the book, you will see what is said about the fish. I have never seen the species out of Orkney" (W. Reid, in *lit.* 12/9/85).

A curious fact recorded by Day is, that this fish in Cornwall rarely enters sandy bays, and that from its large prominent eyes, it seems to be an inhabitant of the deep sea.

Mr. Scarth (Day, *Brit. Fishes*, vol. ii. p. 22) says this species is rarely seen on the shore in Orkney except between October and April, and that the times they usually sail ashore is before a storm or when a thaw sets in.

*Pleuronectus platessa*, L. Plaice.

Common. According to Low, not very large, nor is it much sought after.

*Pleuronectes microcephalus*, Donovan. Smear Dab.

Day records two caught in July and August respectively, in the year 1848, by Dr. Duguid and Mr. Iverach.

*Pleuronectes cynoglossus*, L. Craig Fluke; Pole.

In *Land and Water* Mr. Peace recorded the capture of two fish of this species in May 1880, in Scapa Bay, within a day or two of

each other ; one measured  $19\frac{1}{2}$  inches long, the other was rather smaller.

**Pleuronectes limanda, L. Common Dab.**

Common.

**Pleuronectes flesus, L. Flounder.**

Low says it is common in all the creeks and bays, and especially in the shallower parts of the loch of Stenness. Mr. Moodie-Heddle says it is rarer than the Plaice.

**Solea vulgaris, Quinzel. Sole.**

Low describes a fish he calls a Sole, and says it is easily distinguished from the rest of the genus by being so narrow in proportion to its length: he gives the loch of Skaill as a locality, and Mr. Moodie-Heddle gives St. Margaret's Hope.

Baikie says it is rare: we ourselves have never seen one: nor has Mr. Cowan in fifty years' experience.

**Solea aurantiaca, Günth. Lemon Sole.**

Dr. Duguid obtained a specimen of this species in August 1848.

Order 4. **PHYSOSTOMI.**

Family **SCOMBROSCIDÆ.**

**Belone vulgaris, Flem. Garfish.**

Not uncommon, according to Baikie. Scapa, 1845.—J. G. M.-H.

**Scombresox saurus (Walb.). Saury; Skipper.**

Low mentions that in 1773 such a glut of these fish set into the head of Kerston Bay, that they could be caught in pailfuls. Numbers were caught, and heaps flung ashore. The seamen called them Garfish, and said they were common on the American coast. They had not been known there before. Mr. Moodie-Heddle writes us that they occurred at Oisemouth, Kirkwall, in May 1849.



Family **STERNOPTYCHIDÆ.****Maurolicus pennantii** (*Walb.*). Argentine.

Low obtained a single specimen, which was given him by a boy, who found it amongst the ware at the edge of the water. Since then it has been found by Mr. Moodie-Heddle and Dr. Duguid, and, in 1863, Harvie-Brown, in company with J. Dunn, obtained a specimen by dredging, in slack water in the Sound of Hoy.

Family **SALMONIDÆ.****Salmo salar**, *L.* Salmon.

Fea, writing in 1775, speaking of Salmon in Loch Stenness, says that "in all probability there would be a good Salmon Fishery here, were it not that the mouth of the loch is so much choked up with sea-weed that the fish cannot get into it. What confirms this opinion is, that in some charters belonging to the gentlemen in the neighbourhood, the Salmon-fishing in this loch is expressly reserved to the King as his exclusive right" (*vide State of Orkney and Shetland*, p. 39).

Low says that, if present, the Salmon must be very rare in Orkney, and he only knew of three or four instances of their occurrence there, adding, in brackets, "if they were all salmon."

All our correspondents agree as to the rarity of the Salmon in Orkney, though one of them qualifies the statement by saying that they are said to be rare because they are not fished for. They certainly do not breed there. A fish of 27 lbs. weight was killed at Orphir in 1843, but *how* is not stated.

Mr. Cowan says that he has only once caught a true Salmon in Orkney, and that a grilse.

**Salmo trutta**, *Flem.* Sea-trout.**Salmo fario**, *L.* Common Trout.

The notes we have received from several of our correspondents on these two species are so intermingled that in many instances it would be impossible to separate them without taking away their meaning. We have therefore given them *in extenso*, and

we trust our readers will have no difficulty in understanding what is meant.

Mr. Cowan, whom we largely quote, has probably had more experience of Orkney trout than any other person in these islands, and therefore his notes (however we ourselves may disagree with them) must always carry weight.

Our own experience, extremely slight, and entirely confined to the island of Rousay, we give further on. First of all we quote Mr. Moodie-Heddle of Melsetter:—

“About Trout, I go even further than Dr. Day about species, and used to have many arguments with Tudor<sup>1</sup> and Francis Francis thereanent. I believe there are in Orkney, 1st, some few stray Salmon which do not breed here; 2d, a comparatively rare fish, usually running 6 lbs. to 12 lbs., with square tail when young, and round when old—this I call Bull Trout: 3d, the common sea-trout, the tail of which, even in a 12 lb. specimen, is never more than square, and in the young fish is forked: 4th, the Stenness trout, which have been, like the Loch Leven, a landlocked sea-trout, though now landlocked no longer: 5th, the common *Salmo fario* in a few lochs: 6th, Char in Helial’s Water.

“The fish in most streams are simply young sea-trout, some of which would perhaps never put on silver. I believe myself that, in the north, the *Salmo fario* and Common Sea Trout could be one made into the other in a few generations.”

We will here let Mr. Cowan speak for himself; and though his observations may seem to some too sweeping in their character, we ourselves are much more inclined to agree with him than with those who are so ready to make a new species out of every slight variety.

“As to Trout, my long experience has culminated in a fixed idea or ‘fad,’ and is so heterodox that you would not benefit by listening to me on the subject. I held ideas in common with the multitude for years on the subject; now I am certain there is only one trout in Orkney waters, and that, the ordinary fish of the lakes and burns. If the Sea-Trout are debarred from returning to the sea, they soon take the garb of the lake or fresh-

<sup>1</sup> “Old Wick” of the *Field Newspaper*.

water fish, and remain so. I have repeatedly caught yellow trout (perfect), two or three miles from any fresh water containing trout, *in the sea* (pure salt water), and I once caught five ordinary sea-trout in the sea,  $\frac{3}{4}$  lbs. each, on the fly, and transported them to a quarry-hole near my house, from which we get the water we need; it was 12 feet deep and 20 yards long by 4 or so wide. These fish lived for a year, all five, then a scamp caught one; for two years there were still three, but a frost seemed to have caught one in shallow water, and froze it to death; it was about 1 lb. in weight, and fat and red-dotted. I fancy there is still one left. At the end of four years I caught one of these and returned it; then in appearance there was little or no difference from a lake trout, that I or any other judge could pick out. If our lakes have a hard bottom and much long weeds, the fish are usually white-fleshed and ill-fed, of which the whiteness is a symptom. If, on the other hand, the bottom of the lake is carpeted with chora, the fish are always fat and the flesh red, and the stomachs full of flat shell snails. The trout, both sea and lake, spawn about the 13th or 14th of November, with strange precision of date. Many do not find suitable water or places, and don't spawn, and the small lakes are in spring full of voracious kelts, which devour their babies in a serious way, and I suspect a very small number now ever get back to the sea, for every burn has a number of little mills, and none have waterways for any fish to pass, unless in furious spates, which are very uncommon in spring in Orkney."

Alluding to the fish in the loch of Boardhouse, Mr. Cowan further adds:—

"Of the loch of Boardhouse I have some remarkable things to say. One out of six is red-fleshed; five are white. All are well fed, all very strong, plucky fellows, but none are good to eat, and all are nasty. The burn runs through stony beaches to the sea, and once in a way bores a big adit, then some sea fish run up, but the next western sea rolls the stones in again."

The following is a list of the lochs in Orkney which contain trout, and for which we are mostly indebted to Mr. Cowan:—

Westray, two—Burness and Saintear; Rousay, three—Saviskail, Muckle and Peerie Waters; Hoy—Trout in Orgill,

Char in Helldale's water. Trout were introduced into other lochs in Hoy, but Mr. Moodie-Heddle thinks they have either died out, or else that, being young sea-trout, they tried to migrate, and the burns falling sheer down into the sea, some 150 to 200 feet, of course they could not get up again.

S. Ronaldsay, one; Mainland, parish of Harray and Birsay, five—Swannay, Boardhouse, Hundland, Isbister, Harray; Sandwick, two—Voy and Rango; Firth and Stenness, two—Stenness and Wasdale; Orphir, one—Karbister; Holm, two—St. Mary's Loch and Græmeshall.

Concerning the loch of Rango, Mr. Irvine-Fortescue says:—"The loch of Rango lies between the north-west bay of the loch of Harray and the loch of Skaill. It is marked as a "Mill loch" in A. & C. Black's "Reduced Ordnance Map." I fished it once with Watt a good many years ago. We got six fish from  $1\frac{1}{2}$  lbs. up to 4 lbs. I saw no small fish in the loch. The trout we got were in first-rate condition. At that time it appeared impossible for a trout to get up from Harray even during a spate, owing to a fall which had been made in the waste water-course by quarrying. But I have no doubt the larger fish in Rango had come up from Harray before the waste water-course became impassable. The loch appears to be too small to contain many large fish, and I do not think a 4-pounder has been got in it since the time I speak of."

"A mill in Orkney is usually a terrible fish-trap. Every time the water is shut off, the trout which have come up can be easily killed—except during a spate. And of those that get past by the waste water-course, if there chances to be a passable one, some are killed in going down again over the wheel."

The prettiest trout in Orkney come from St. Mary's Loch, Holm; the best to eat from Wasdale, Firth; and the worst from Boardhouse, as before mentioned.

These lochs all have exits to the sea, but all the burns combined would not make a small salmon river. Wherever a permanent burn runs into the sea, there are sea-trout at the mouth in spring and autumn. In these situations Mr. Cowan observes that they take a fly before any other lure he has tried, while Mr. Moodie-Heddle generally uses a spinning bait, or even a worm.



Mr. Irvine-Fortescue says, speaking of *Salmo trutta*, "A few along the shores of Swanbister Bay; we once caught one of 6 lbs. in a trammel-net in 8 fathoms of water there. They run up the Orphir burn to spawn, and are there unmercifully slaughtered."

Further on, under *S. fario*, the same gentleman says:—"Occasionally caught in a net along the shores of Swanbister Bay up to two pounds. There is no stream large enough to hold fish of this size, except during a spate. The only other fresh water in the neighbourhood is the loch of Kirbister, where the fish rarely exceed three-quarters of a pound."

"In the loch of Harray the trout appear to congregate in shoals. In fly-fishing you may fish along the shores for hours, and hardly ever get a rise, till at last one comes upon a shoal in some bay, when you may fill your basket. In 1873, with a friend, we once in this manner caught  $12\frac{1}{2}$  dozen, weighing 40 lbs., in about two hours. We landed them in twos and threes as fast as we could get them out. I put on four flies, and once landed four trout at a time; the best dozen averaged 1 lb. each. In other lochs the trout appear pretty evenly scattered over the whole."

Trout of very large size are caught in Stenness and Harray. One of 30 lbs. was got on a set line in October 1888, which was set up by Malloch of Perth, and is now in the possession of the landlord of the Masons' Arms, Stromness, where we saw it—a very handsome male fish, especially thick towards the tail.

As before said, our personal experience of trout in Orkney is entirely confined to the island of Rousay. There are three lochs—the Muckle and Peerie Waters, and Saviskail. The two former are close together, and connected by a short burn, and from the Muckle water the Sourin burn leads to the sea. At the mouth, or rather close to it, is the inevitable mill, and here the greater part of the larger sea-trout meet their doom. A few of the smaller ones, however, manage to get up at least as far as the sluice-gates on the loch, as a friend of ours, while staying with us at Westness, caught a sea-trout of about 1 lb. in weight, though entirely black from the nature of the water and the peat-hole from which it was taken.

The trout of these two lochs are in shape and colour like the generality of Highland loch trout elsewhere, and are red-fleshed and excellent eating. Those of the Peerie Water may have slightly the advantage in average of size, judging from an afternoon's fishing, when somewhat over two dozen averaged rather over half a pound.

The loch of Saviskail, however, differs somewhat from the foregoing; for whereas they are situated high up on the hill, Saviskail is only a few feet above sea-level, shallow, and surrounded entirely by cultivated ground. It is also connected with the sea by a burn some hundred yards long, and here again the usual mill obtains. The bottom is muddy, and there are considerable patches of reeds along the sides, a great resort of wild ducks.

At the time of our visit in 1883 there had been little rain, and the loch was as clear as glass. Covering the muddy bottom as with a carpet was a sort of weed, like felt, cracked and upturned in places, as one sees muddy puddles on the road-side after a quick drought, and it was probably under these upturned pieces of weed that the trout lodged. The trout themselves were beautiful to look at and good to eat, though perhaps hardly as good in the latter respect as those of the other lochs. In colour they resembled sea-trout, and the sport they gave was excellent. One day, after some heavy rain, we went to fish the loch with a friend, and found that the discoloured water had quite destroyed the fine appearance of our pet trout. All their beautiful silvery look was gone; but this was probably owing to their power of changing their own colour to adapt themselves to their present surroundings.

There seemed to be no trout of any very large size,  $2\frac{1}{2}$  lbs. being the largest we got, nor could we hear of many of much greater weight ever having been taken. This was probably owing to the comparatively small size of the loch, and its shallowness, for nowhere did this exceed 6 feet, and that only in one small spot; its general depth would be about 3 feet. Another reason, however, for there being no large fish might be that the burns in which they had to spawn for the most part were very shallow, and of course any large fish would be seen and taken out by the natives.

*Salmo alpinus*, L. Char.

Said by Low to have been caught in the loch of Stenness, but we have no later or other evidence of their existence there. Indeed, the only place in Orkney where these fish exist is in the loch of Helial, or Helldale, in Hoy, and Mr. Moodie-Heddle, the proprietor, has sent us the following note about them : " Only in Helial's, or Helldale's, Water in Hoy. This loch is very deep, over 12 fathoms in places. Wallace mentions Stenness as a locality, but he has undoubtedly in this, as in much else, made a mistake. It is quite unsuited to Char, from its extreme shallowness. Helial's Water is over one-and-a-half miles long, by perhaps 500 yards broad on an average, and I have got as many as twenty-two Char in it on one set line, but only once caught a couple on the rod."

Mr. Cowan informs us that he sent some Char to General Burroughs for the Muckle Water in Rousay, but we have never heard how they fared since.

*Osmerus eperlanus* (L.). Smelt.

Mr. Moodie-Heddle gives Watersound as a locality for this species.

*Thymallus vulgaris*, Nilss. Grayling.

[*Obs.*—Low gives this fish a place in his *Fauna*, and, from the way he writes of it, seemed to consider it common. There is nothing in his description to indicate what species he mistook for it.]

Family **CLUPEIDÆ**.*Clupea harengus*, L. Herring.

At the time when Wallace wrote there was a herring-fishery in Orkney, which seems to have been principally prosecuted by

boats from Fife, but he adds that so many of the skippers and seamen were killed at the battle of Kilsyth, that the trade died out.

Low writes that for many years no herrings had been caught in Orkney, though, he adds, not from the want of them. He heard of them as far up in the sounds as Scapa Bay, and says that at certain seasons these sounds swarm with the fry, and he himself caught numbers in the fresh (?) water at the mouth of Loch Stenness.

At the commencement of this century herrings were so scarce in Orkney that it was not worth the natives' while to prosecute their fishing, although these fish were abundant off both the Shetland and Caithness coasts.

During the last two years herrings have been fished just outside the west of the Pentland Firth, the great bulk of the fish being landed at Scrabster, though a certain amount come into Stromness. Those herrings that are caught early in the season are used principally as bait for the long lines.

Mr. Moodie-Heddle writes us that he has known herrings caught off Walls (Hoy) with bare tin hooks on July 18th, 1849.

### *Engraulis encrasicolus* (L.). Anchovy.

In a note to a letter from Mr. Moodie-Heddle that gentleman says: "By the way, I daresay you know there were lots of Anchovies all over Orkney this winter, in the inner sounds." This, taken in connection with their recent appearance in East Coast waters, is not so very surprising.

### Family **MURÆNIDÆ**.

*Anguilla vulgaris*, *Flem.* Sharp-nosed Eel.

Numerous everywhere.



*Conger vulgaris*, *Cuv.* Conger.

Common. Mr. Irvine-Fortescue says the Congers were formerly thrown away when caught, but now they are sent to the southern market. Last summer (1889), for the first time, he saw a boat close inshore off Swanbister Bay fishing Congers, for which, he was told, they got 6s. a cwt. For years a family, which came from Banffshire, and settled in Orphir, have fished Congers about Copinsay for the southern market.

Order 5. **LOPHOBANCHII.**

Family **SYNGNATHIDÆ.**

*Siphonostoma typhle* (*L.*). Deep-nosed Pipe-fish.

Mentioned by Low as not rare, and some of our other correspondents corroborate this.

*Syngnathus acus* (*L.*). Great Pipe-fish.

Occurs not uncommonly. Mr. Irvine-Fortescue has found it about Swanbister.

*Nerophis æquoreus* (*L.*). Æquoreal Pipe-fish.

Reported as not scarce by Baikie.

A very fine specimen of this curious species of fish was taken at Kirkwall Pier in January 1881 by Mr. T. Peace of that place, and sent up to the editor of *Land and Water* for identification.

*Nerophis lumbriciformis* (*L.*). Little Pipe-fish.

Said to occur in Orkney commonly (Baikie).

*Hippocampus antiquorum*, *Leach.* Sea-horse.

Day mentions one that was picked up dead in the Orkneys, and recorded by Baikie in the *Zoologist* for 1853, p. 3847.

Order 6. **PLECTOGNATHI.**Family **SCLERODERMI.**

*Balistes capriscus.* *Gm.* File-fish.

Recorded by Baikie as having been taken in the Orkneys in 1827 or 1828 (*Zool.* 1853, p. 3847).

Family **GYMNODONTES.**

*Tetrodon lagocephalus,* *L.* Pennant's Globe-fish.

Baikie records two examples from Orkney (*Zool.* 1853, p. 3847).

*Orthogoriscus mola* (*L.*). Short Sun-fish.

Occurs occasionally.

*Orthogoriscus truncatus* (*Retz.*). Oblong Sun-fish.

In November 1875 a fish of this species was captured in Kirkwall Bay, which measured 6 feet 6 inches in length, and 1 foot 8 inches in width, the upper fin being 2 feet 5 inches, and the lower or vertical one 2 feet 4 inches in length, and it weighed nine and a quarter cwt. (W. Reid, *Land and Water*, Sept. 1878). It has also been recorded previous to this by Messrs. Baikie and Duguid.

Sub-class 3. **CYCLOSTOMATA.**Family **PETROMYZONTIDÆ.**

*Petromyzon marinus,* *L.* Sea Lamprey.

Day (*Brit. Fishes*, vol. xi. p. 358) says: "One occurred several years ago off Stromness, and one has since been taken by Dr. Duguid."

## A P P E N D I X.

SHAPINSAY.—Mr. Monteith-Ogilvie found Rock Pigeons, Rock Pipits, Herring Gulls, Guillemots, Black Guillemots, Razorbills, Puffins, and Shags breeding in the rocks of the island. We mention this here, as, having other places of greater interest to visit, we never found time to go over to this island. Mr. Ranken also informs us that there are grouse (? migrants only) on the Galt point of Shapinsay, though not in any quantity, as there is only a very limited area of heather, but this is well sprinkled over with their marks.

While on the subject of Grouse, we may mention that Mr. Ranken made special inquiries about their existence in Burray from the natives, and in a letter dated June 7th, 1890, he says:—"I have inquired from Burray people as to Grouse there, and I am informed that they have been seen in Hundu, the west portion of Burray, (and) which becomes a separate island at high water, for the past 30 years, a few coming over probably from Flotta or Hoy, remaining as visitors for a time, and frequently a pair or so remaining to nest. Hundu is nearly all short heather."

### *Cervus tarandus*, L. Reindeer.

In the *Proceedings of the Society of Antiquaries of Scotland*, New Series, vol. iv. p. 447, there is a notice of a piece of a Reindeer's horn found near Skaill by Mr. Watt. Through the kindness of this gentleman we were enabled to submit the specimen to Professor Boyd Dawkins for examination, and he informs us that it must be referred to the Red Deer. The palmation of the horn alluded to is very striking, but we have seen instances of this in the present Red Deer (though, of course, on a much smaller scale) when looking over the very large number of heads which are annually sent for preservation

to Mr. Macleay in Inverness. It may be remarked that Reindeer horns are always, so far as we have seen, *smooth*, never having any of those furrows and corrugations generally present in those of the Red Deer.

*Pratincola rubicola* (L.). Stone-chat.

Mr. Monteith-Ogilvie sends us an instance of another pair of these birds, which he observed evidently nesting. We think these particulars well worth recording, as the bird has hitherto not been considered as breeding in the Orkneys:—

“*June 4th*, 1890.—Drove to Lesbidale, and there started our tramp. After going about a mile and a half, ascending slowly all the time, saw a pair of Stone-chats in a patch of tolerably long heather. Gunn said he had never seen birds like them before, and asked me what they were. I should think they had got young birds in the heather, certainly either young or eggs. They were very anxious while we were there, and were seldom more than twenty yards away. I only spent ten minutes looking for the nest, as I thought it probable they had three-parts-grown young birds in the heather, being such early breeders, and I was anxious to get on. . . .”

*Phylloscopus trochilus* (L.). Willow Wren.

Mr. Ranken heard a Willow Wren singing at Birstane on May 22d, 1890.

*Troglodytes parvulus*, *Koch*. Wren.

Harvie-Brown and Eagle Clarke were much struck with the great size and light appearance of the Orcadian Wren when they visited the islands in June 1890.

*Coracias garrulus*, L. Roller.

Mr. Mackay of the Masons' Arms, Stromness, informs us that a Roller now in his possession was shot by Mr. Alexander Young,



a ship's carpenter, in the parish of Sandwick, on the Mainland, about the end of October 1889. Mr. Mackay further writes that he himself saw two Rollers in the hills of Westray, above Pierowal, on the 10th of November 1890.

*Caprimulgus europæus*, *L.* Nightjar.

Mr. Ranken sends us word that a Nightjar flew into a farm-house at Carrick, island of Eday, on May 24th, 1890, and survived its capture for a day or two.

*Asio accipitrinus* (*Pall.*). Short-eared Owl.

*Circus cyaneus* (*L.*). Hen Harrier.

*Falco æsalon*, *Tunstall*. Merlin.

Mr. Monteith-Ogilvie sends us notes from his diary of a day's birds'-nesting on one of the Orkney hills, and as the three above-named birds are now getting *much* rarer, on the mainland of Scotland particularly, we think it advisable to place the following facts on record:—

*June 4th*, 1890.—“Just then Gunn called from below that he had found a Harrier's nest, and——. I went up to him and saw a Hen Harrier's nest with two eggs, built on a few loose rushes, and singularly easy to see. . . .

“Continuing our journey round the hill I flushed a cock Grouse, and a little farther on found a Merlin's nest with one egg. Quite close to this I flushed another Merlin from its nest, with four eggs (fresh), all of which we took.

“Having lunched, we continued our journey—and next found a second Harrier's nest with three eggs. We had great trouble with this, and had to watch the birds, both of which we saw for an hour before we could make certain of the nest.

“Saw three Short-eared Owls round here; their castings about everywhere, but could not find their nest. They were certainly breeding, but very difficult to find.”

**Phalacrocorax carbo (L.). Cormorant.**

Mr. Ranken informs us that an albino specimen of the Cormorant was obtained in Sanday at the end of February or beginning of March 1891.

**Chenalopex ægyptiaca (Gmel.). Egyptian Goose.**

In reference to the Egyptian Goose mentioned in the text as having been killed in the Orkneys, Mr. Moodie-Heddle tells us that the following note was found in a copy of Yarrell (3d vol. p. 175), belonging to his father:—"Two at North Berwick, 1842, of which I have one." And this note is signed by his father.

**Syrrhaptes paradoxus (Pall.). Pallas' Sand Grouse.**

Three Sand Grouse were seen in Shapinsay in 1888, and dead ones were picked up both in that island and in Swona. In Stronsay a male was shot on the farm of Housbay, and is now stuffed and in the possession of Mr. Learmonth there. Sand Grouse were also seen in Auskerry by Mr. MacAlister, the keeper of the lighthouse.

**Perdix cinerea, Lath. Partridge.**

We have to record another addition to the list of failures in trying to acclimatise this bird in Orkney. Some few years ago, Mr. Warne informs us, Col. Horwood turned down some Partridges on his estate in Sanday, which island seems well adapted to the requirements of the birds, but they never thrive, if they ever bred there, and now they have all disappeared.

**Ægialitis hiaticula (L.). Ringed Plover.**

Messrs. Harvie-Brown and Eagle Clarke particularly noticed the very large size of the Orcadian Ringed Plover during a visit to the islands in 1890.

*Scolopax rusticola*, L. Woodcock.

Although the Orkneys never had a great reputation for Woodcocks, at times large flights of these birds arrive there, especially in Hoy. Under date of March 26th, 1890, Mr. Moodie-Heddle writes us as follows :—"About Woodcock in Orkney, it depends somewhat on the season, but I never failed in getting a few brace in Hoy between the middle of October and the middle of February.

"A few sometimes stay to breed, as I think I told you. I have seen two nests, and know of the eggs having been taken on the Hobbister ground.

"I believe a man in Stromness made a big bag near there some years ago, coming on them just after they had landed, though I never was fortunate enough to fall on a big lot but once, when I put up, I think, thirty-one, but only got three or four, as it was the first of a thaw after deep snow, and they were exceedingly wild, and the snow deep and wet.

"A keeper of ours once flushed forty in an afternoon, in Hoy, I believe, without a dog; and when gathering sheep for smearing, somewhere about three years ago, my shepherd and the griever told me they put up, along one beat, over forty Woodcock; unfortunately they did not tell me till the third day after, which was wet; next day they had moved, and I only got three, I think.

"Six and a half brace was the highest I ever killed in a day in Hoy, and one and a half in Walls, where they are not so common, being more widely spread over the hills, and not so easily found.

"A good many died there (Hoy) with a hard frost some years since. I had one once, damaged by the telegraph wires, which got pretty tame. They seem more intelligent than Snipe, I think, but are not so demonstrative."

*Tringa minuta*, Leisl. Little Stint.

Mr. Warne, during a visit to Sanday in September 1890, recognised three Little Stints there on the shore.



*Tringa subarquata* (Güld.). Curlew Sandpiper.

[We made inquiries concerning a specimen of this bird mentioned in *Rod and Gun*, for September 13th, 1890, as having been shot at Renniebister. Mr. Ranken traced the bird to Mr. Small the birdstuffer, in Edinburgh, and the latter told Mr. Ranken that it was a Reeve.]

*Numenius arquata* (L.). Curlew.

On June 4th, 1890, Mr. Monteith-Ogilvie found a Curlew's nest in the parish of Orphir. The bird was sitting on four eggs, and allowed him to get within five or six yards of it. The eggs were only slightly incubated.

*Sterna macrura*, Naum. Arctic Tern.

All the terns found breeding on Damsay by Mr. Monteith-Ogilvie in 1890 were of this species.



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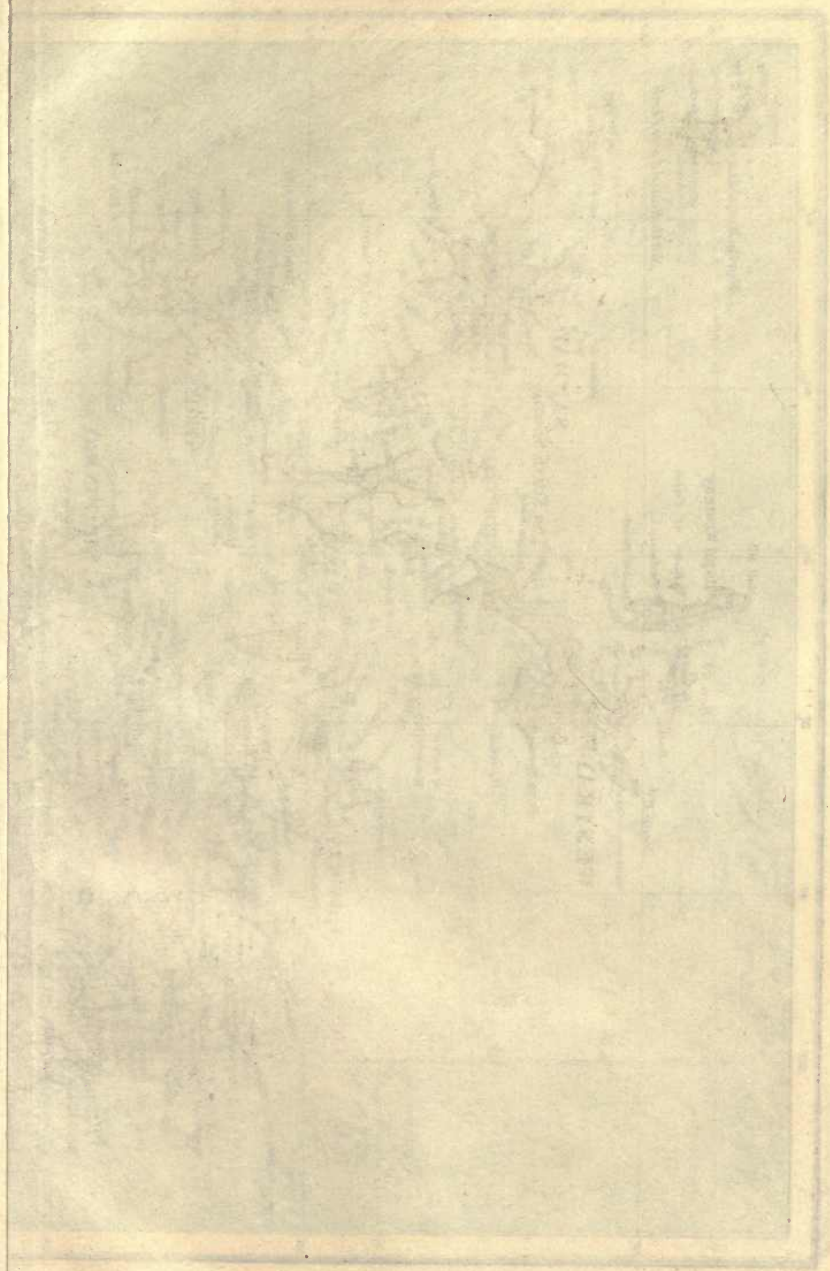
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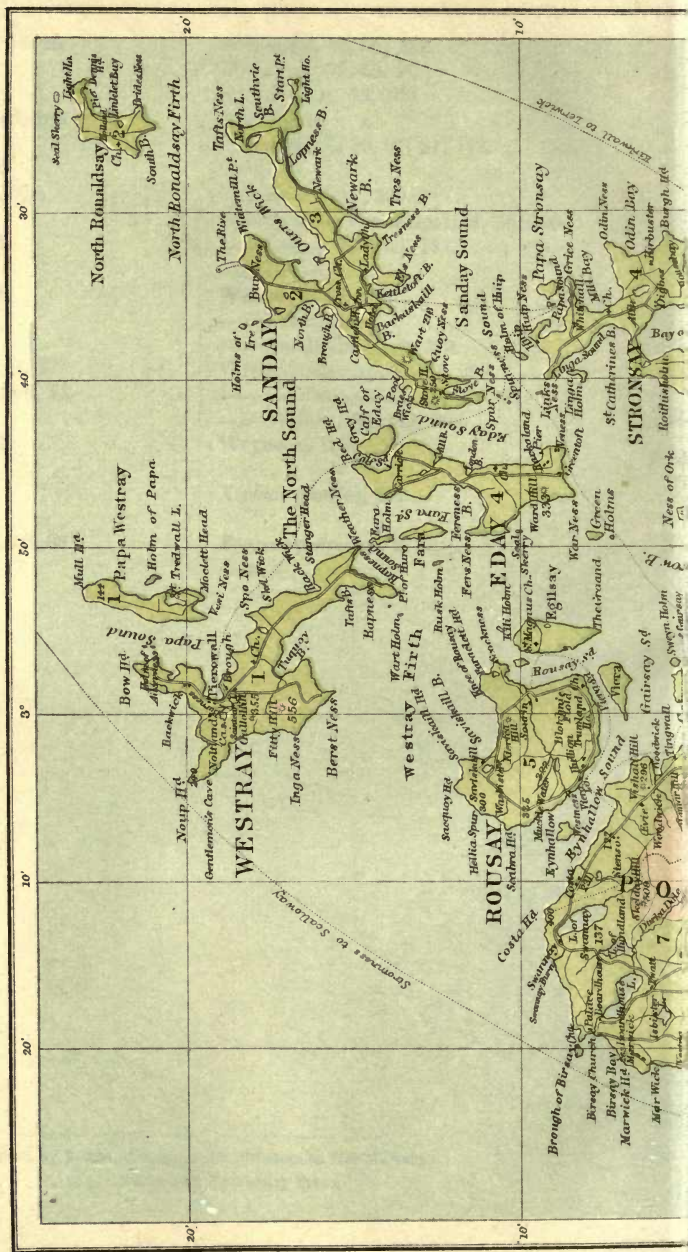
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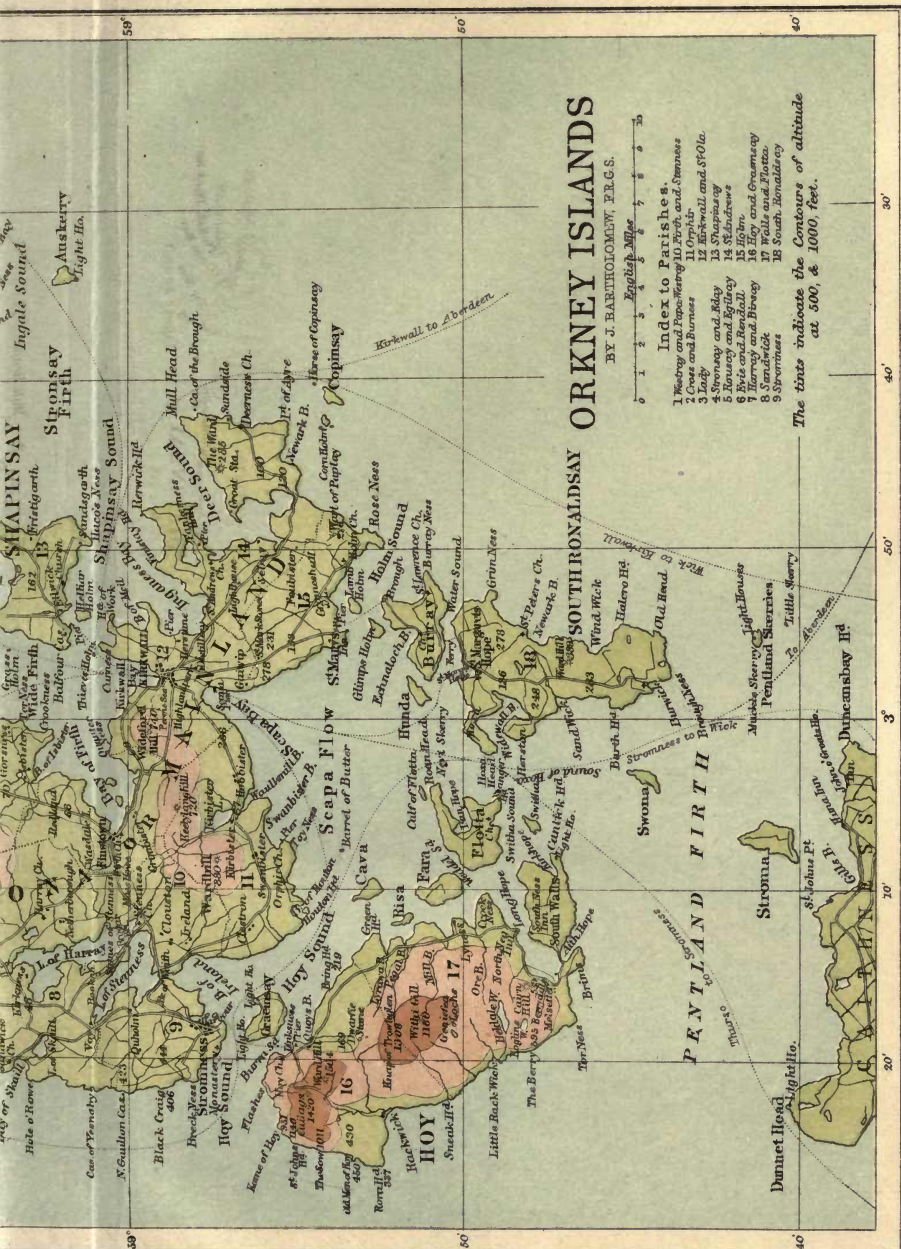
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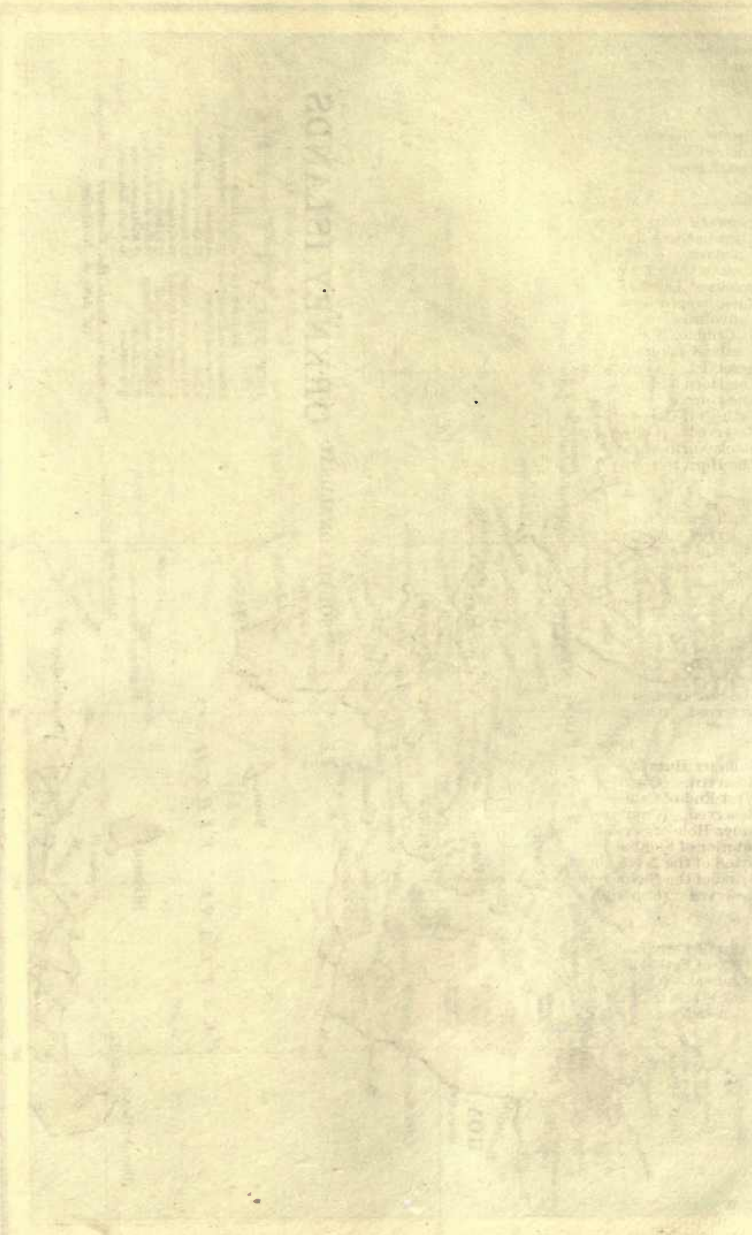
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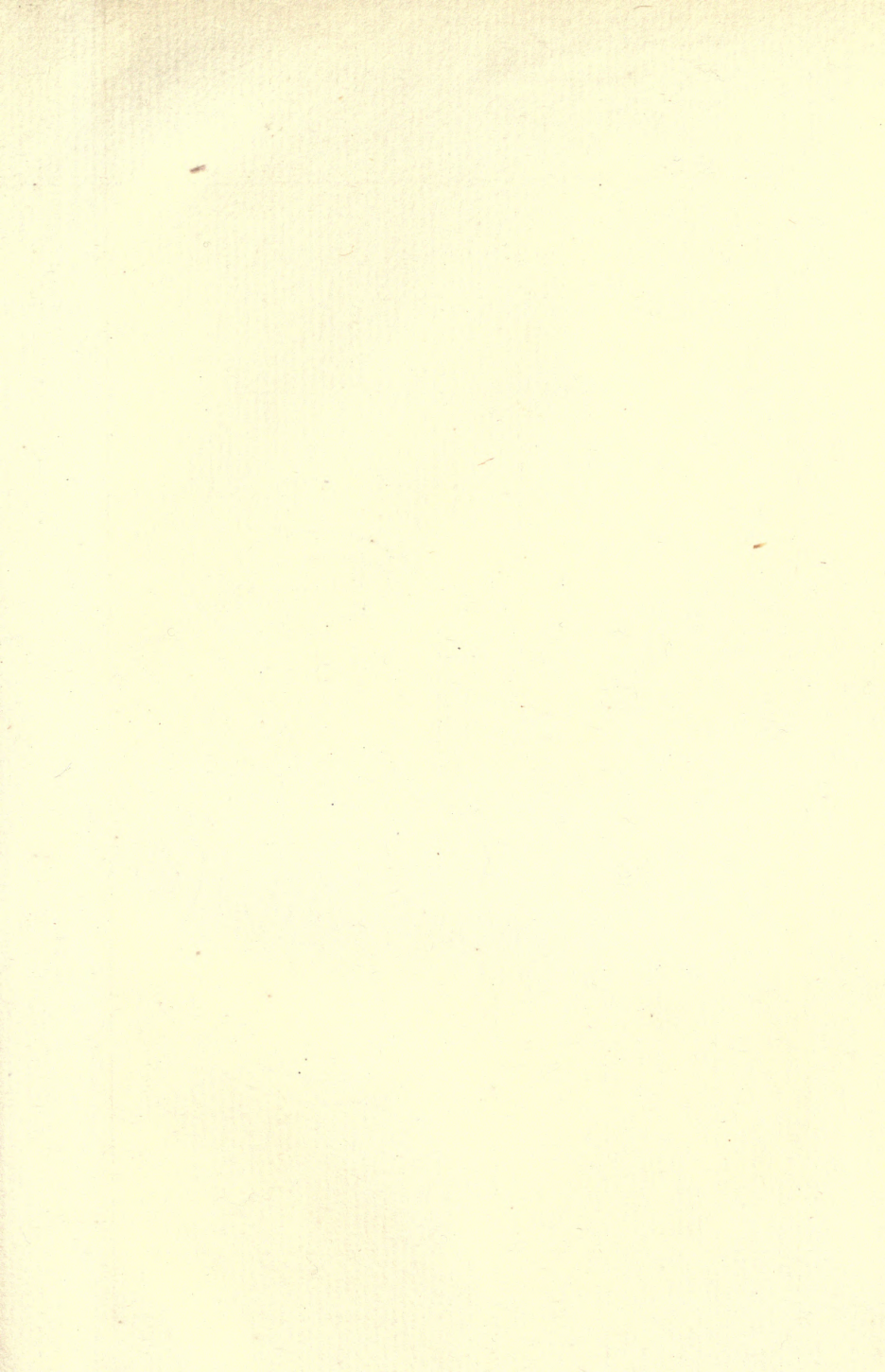


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